

**City of Folsom**  
**Bureau of Reclamation**  
**Five-Year Water Management Plan**  
**Update**  
**December 2010**



*Prepared By:*

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## **Section 1: Description of the District**

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### **A. History**

The Natomas Water Company (NWC) had water rights of 32,000 ac-ft/year based on a filing in 1851 with El Dorado County, CA. The primary users of this water were customers with mining interests. NWC continuously maintained diversions on some or all of this water for beneficial use. In June 1951, NWC entered into a contract with the Corps of Engineers to provide facilities to NWC for the divergence and conveyance of the water from the South Fork of the American River. The contract stated that the water was to be rearranged, relocated, or altered and delivered by the United States to NWC. The NWC conveyed its interest in the water rights and facilities to Southern California Water Company (SCWC). The City acquired 11/16ths of these water rights and all facilities from SCWC. The City entered into a contract with the USBR in June 1971, which was “expressly [to] preserve and recognize the rights of the City to 22,000 ac-ft/year of water rights water” (USBR contract No. 14-06-200-5515A, 6/22/71). This contract gives USBR rights to reduce the amount of water the City receives during drought conditions.

Since 1972, the City has had a contract with the San Juan Water District (SJWD) to purchase wholesale treated water for the Ashland area. The Ashland area is within the city limits and located northwest of the American River. This agreement was amended in February 1983 to supply all the water necessary for the Ashland area by SJWD. This agreement was amended again in September 1983 to establish that the City will purchase a minimum of 700 ac-ft/year. The City has consistently received a greater amount from SJWD than their minimum allotment. The City has agreed to pay SJWD for any additional water to service the Ashland area that SJWD has under their USBR contract. The SJWD is not required to supply water to the Ashland area if the District experiences water shortages, which are beyond their control.

In 1996, the City entered into an agreement with SCWC to lease 5,000 ac-ft/year of their remaining 5/16 portion of their water rights. The water supply lease is open-ended and can only be cancelled by the City. The City also has a subcontract with the Sacramento County Water Agency for 7,000 ac-ft/year of contract water, which is also known as Fazio Water. As a condition of this contract, SCWA pays the Bureau for water deliveries and the City reimburses SCWA for its portion of the costs. Currently the City submits a monthly report of water deliveries to both the Bureau and SCWA detailing how much water was delivered under each contract.

The City of Folsom does not currently pump groundwater for delivery, and groundwater supplies within the City of Folsom are considered to be limited. The City’s 2006 Groundwater Resources

Study prepared by Brown & Caldwell indicates that the area from which groundwater can be produced in significant quantities are less than half of the total area of the incorporated city. In particular, the areas underlain by relatively impermeable Mesozoic bedrock has little or no potential for significant well yields. The alluvial aquifer that underlies a portion of the City is fairly thin. Therefore, its operable capacity is somewhat limited. Based on the conceptual hydrogeologic model of deposits in the study area, groundwater in much of the eastern part of the study area could be subject to natural depletion due to natural drainage from downslope flow and stratigraphic control (sloping bedrock contact), especially during periods of drought.

The City has an agreement to provide treated and untreated water to Aerojet through a 2007 contract, which amended the original 1986 agreement. Water served to Aerojet is included in the City's designated water supplies.

*1. Date district formed and original size*

Date district was formed	1946
Date of first Reclamation contract	June 22, 1971
Original size (acres)	392
Current year	2009

*2. Provide size, population, and irrigated acres.*

Size (square miles)	24
Population served <sup>1</sup>	59,660
Irrigated acres	0

*3. Provide water supplies received for current year, 2009.*

Water Source	Ashland <sup>2</sup> (AF)	Folsom Main <sup>3</sup> (AF)	Total (AF)
Federal urban water	0	915 <sup>4</sup>	1,174
Federal agricultural water	0	0	0
State water	0	0	0
Other wholesale	0	0	0
Local surface water	1,647	24,148	25,536
Upslope drain water	0	0	0
District ground water	0	0	0
Banked water	0	0	0
Transferred water	0	0	0
Reclaimed water	0	0	0
Other	0	0	0
Total	1,647	25,063	26,710

<sup>1</sup> This population does not include the Folsom State Prison or the American River Canyon, which are within the City of Folsom limits, but not served by the City of Folsom

<sup>2</sup> The City of Folsom has a wholesale water supply agreement with San Juan Water District for treated water, which is delivered to the Ashland Service Area, CDPH Purveyor #3410030.

<sup>3</sup> Water treated at the Folsom Water Treatment Plant, CDPH Purveyor # 3410014.

<sup>4</sup> City of Folsom sub-contract with Sacramento County Water Agency for Contract No. 6-07-20-W1372 (CVP).

4. *Provide annual entitlement under each right and/or contract.*

	AF	Source	Contract #	Contract Restrictions
City of Folsom & Southern California Water Company contract with USBR (June 1971)	22,000	American River – Folsom Lake	14-06-200-5515A, non project water	Voluntary reductions according to American River flows per the Water Forum Agreement. No restrictions in contract for total amount.
City of Folsom & Southern California Water Company contract with USBR (May 1970)	5,000	American River – Folsom Lake	14-06-200-4816A, non project water	Voluntary reductions according to American River flows per the Water Forum Agreement. No restrictions in contract for total amount.
City of Folsom subcontract with Sacramento County Water Agency, Fazio Water (April 2000)	7,000	American River – Folsom Lake	6-07-20-W1372 CVP Water Supply Contract	Delivery during shortage years in accordance with USBR M&I Shortage Policy.
San Juan Water District contract with USBR (June 1962) City of Folsom subcontract with SJWD (Sept. 2007) <sup>5</sup>	33,000	American River – Folsom Lake	14-06-200-152A , non project water	Voluntary reductions according to American River flows per the Water Forum Agreement. No restrictions in contract for total amount.
San Juan Water District contract with USBR (February 2006) City of Folsom subcontract with SJWD (Sept. 2007) <sup>6</sup>	24,200	American River – Folsom Lake	6-07-20-W1373-LTR1 CVP Water Supply Contract	Delivery during shortage years in accordance with USBR M&I Shortage Policy. Allocations to SJWD members during shortage in accordance with SJWD surface water supply and water shortage management plan.
Agriculture AF/Y	None			
Other AF/Y	None			

5. *Describe anticipated land-use changes (i.e., agricultural to municipal, etc.)*

The majority of the City's service area is zoned residential. The City's current General Plan indicates there are no significant changes to the zoning or land use designation within the city limits. In the Fall of 2009 the City's Community Development Department commissioned the planning consulting firm of Dyett & Bhatia to conduct a 50 year growth analysis to begin the General Plan update process. The results of this future growth needs study will help the City of Folsom to establish a General Plan planning area boundary which recognizes how much land will be needed for future growth and to determine growth boundaries.

<sup>5</sup> See Attachment J for the San Juan Water District and City of Folsom Wholesale Water Supply Agreement for water supplies to be made available to the City.

<sup>6</sup> See Attachment J for the San Juan Water District and City of Folsom Wholesale Water Supply Agreement for water supplies to be made available to the City.

The Folsom South of U.S. 50 Specific Plan Project would entail annexation to the City of Folsom and development of mixed uses on approximately 3,500 acres south of U.S. 50. Development of the specific plan area would include approximately 1,533 acres of single family and multi-family residential housing, 451 acres of commercial/industrial uses, 121 acres of parks, 1,053 acres of open space, five elementary schools, a joint middle school/high school, and a municipal services facility (e.g., fire station, police station, library, etc.).

#### 6. *Cropping patterns.*

There are no agriculture users in the City's service area.

#### 7. *List major irrigation methods (by acreage)*

Irrigation Method	Acres
N/A	N/A

### B. Location and Facilities

#### 1. *Incoming measurement methods and locations*

The District uses water from two primary diversion points, both of which draw surface water from Folsom Reservoir.

- For areas south of the American River, the City takes deliveries from the Natoma Pipeline, a 42-inch steel pressure pipe that originates at Folsom Dam. The Natoma Pipeline splits into two separate lines: one line to the Folsom Prison water treatment plant, and one line to the Folsom Water Treatment Plant (Folsom WTP). This water is measured through the Folsom PIA ultrasonic meters, a 36-inch (97% accuracy) and a 24-inch (98.5% accuracy).
- At the inlet to the Folsom WTP, the raw water line splits. A portion of the raw water is delivered to the Willow Hill Reservoir through a 30-inch reinforced concrete pipeline equipped with a propeller meter. According to the manufacturer's literature, this propeller meter is  $\pm 2.0\%$  accurate. This portion of the water serves non-potable industrial uses on the Aerojet Industrial Property. The balance of the water is delivered to the Folsom WTP through a 60-inch ultrasonic meter (95% accuracy) and is treated. After treatment at the City's plant, water is stored and pumped through a system of reservoirs and pumping stations to seven pressure zones within the City, and a small pressure zone in Southwest Folsom (the Nimbus Zone) that extends slightly beyond the City limits.
- For the Ashland Area, water is diverted from the Folsom Reservoir and piped to the Sydney N. Peterson Water Treatment Plant, which is owned and operated by San Juan Water District (SJWD). After treatment, water is stored in Hinkle Reservoir until SJWD releases it and pumps or delivers it by gravity flow to the Ashland Area. While SJWD provides water supplies to the Ashland Area, the City physically serves the SJWD water to customers in the Ashland service area. The water is measured through a 24-inch magmeter. According to the manufacturer's literature, the magmeter  $\pm 0.50\%$  accurate.

The City of Folsom, through their water service contracts, has the ability to develop and discharge at the Folsom South Canal. At this time, the City has not developed its intake facility to divert water at this designated location. Below is a table of water measurements devices, the device location, and the device's accuracy.

<b>Location Name</b>	<b>Physical Location</b>	<b>Measurement Device</b>	<b>Accuracy</b>
Folsom Prison Industry Authority (PIA) – 36"	Folsom State Prison	Ultrasonic	97%
Folsom Prison Industry Authority (PIA) – 24"	Folsom State Prison	Ultrasonic	98.5%
Folsom WTP Inlet Meter	Inlet to Water Treatment Plant	Ultrasonic	95%
Willow Hill Meter	Folsom WTP	Propeller	± 2%
Ashland Water Meter	Hinkle Reservoir	Magmeter	± 0.50%

## **2. 2009 Agricultural Conveyance System**

There are no agricultural conveyance systems in the City.

## **3. 2009 Urban Distribution System**

The District contains over 311 miles of transmission pipelines ranging in size from 8 to 30 inches in diameter. The following is a breakdown of the type of pipe within its distribution system.

DIP Pipe (miles)	Steel Pipe (miles)	Concrete Pipe (miles)	AC Pipe (miles)	PVC Pipe (miles)	Cast Iron (miles)	Unknown (miles)
4.4	8.7	6.1	37.0	241.0	10.7	3.1

## **4. List storage facilities.**

<b>Reservoir Name</b>	<b>Capacity (MG)</b>	<b>Type</b>
Cimmaron	2.0	Storage
East Reservoir # 1	3.0	Storage
East Reservoir # 2	3.0	Storage
Finished Reservoir # 1	3.0	Storage
Finished Reservoir # 2	4.0	Storage
Foothills Reservoir # 1	2.5	Storage
Foothills Reservoir # 2	2.5	Storage
Nimbus Reservoir	1.5	Storage
South Reservoir	3.0	Storage
Tower Reservoir	3.0	Storage
Zone 4 (Broadstone) Reservoir	4.0	Storage
Zone 5 (Carpenter Hill) Reservoir	3.0	Storage

A map showing the location of the City's facilities is located in Attachment A.

**5. Outflow locations and measurements methods (Agriculture only)**

There are no agricultural outflow locations or measurement methods in the City.

**6. Describe agricultural spill recovery system.**

There are no agriculture users, or spill recovery systems in the City.

**7. Agricultural delivery system operation.**

There are no agricultural water users in the City.

**8. Describe restrictions on the district's water source(s).**

Restriction	Cause of Restriction	Effect on District Operations
Water Forum Agreement Stage 1- Diversion decreases from 34,000 acre-feet to 30,000 acre-feet	Surface water dry year restrictions through Sacramento Water Forum Agreement as a signatory to the agreement	City will implement conservation measures to meet water demands during supply restrictions.
Water Forum Agreement Stage 2- Diversion decreases from 34,000 acre-feet to 27,000 acre-feet	Surface water dry year restrictions through Sacramento Water Forum Agreement as a signatory to the agreement	City will implement conservation measures to meet water demands during supply restrictions.
Water Forum Agreement Stage 3- Diversion decreases from 34,000 acre-feet to 22,000 acre-feet	Surface water dry year restrictions through Sacramento Water Forum Agreement as a signatory to the agreement	City will implement conservation measures to meet water demands during supply restrictions. The City will enter into agreements with other suppliers that have access to both surface and groundwater for an equivalent exchange of the amount of reduction needed to meet demand.
Water Forum Agreement Driest Year (conference year) - Diversion decreases from 34,000 acre-feet to between 18,000 and 20,000 acre-feet	Surface water dry year restrictions through Sacramento Water Forum Agreement as a signatory to the agreement	City will implement conservation measures to meet water demands during supply restrictions. The City will enter into agreements with other suppliers that have access to both surface and groundwater for an equivalent exchange of the amount of reduction needed to meet demand.

Restrictions of water for the City of Folsom's subcontract with San Juan Water District are described in Attachment J – San Juan Water District and City of Folsom Wholesale Water Supply Agreement.

9. *Describe proposed changes or additions to district's facilities and operations for the next 5 years.*

The City of Folsom's main infrastructure projects over the next five years consist of rehabilitation and replacement of existing water mains within the distribution system. Various other projects within the City will focus on conserved water and water management programs. Below are some of the proposed projects and programs.

- Install approximately 19,000 fixed network units on existing residential and non-residential meters. A fixed network system utilizes Gateway receivers to receive and transfer meter data from transmitters located at each water meter to a database.
- East Tank No. 2 Rehabilitation Project, which includes an internal and external recoat, cathodic protection system, and hydrodynamic mixing system
- Begin a comprehensive, City-wide, leak and loss detection program
- Water management and pressure management program to increase conserved water
- Zone 2 Transmission Main Project
- Installation of two full-throat magnetic meters (16-inch and 24-inch) for flow measurement at the Water Treatment Plant into the City's Zone 2 system
- Implement City-wide residential metered rates
- Aerojet conversion from raw water supplied by the City to GET water for industrial uses. GET water is treated groundwater from wells located on Aerojet property. Currently, this water is extracted and treated at GET A/B Facilities pursuant to the Environmental Requirements.

The Easton Place/Glenborough at Easton developments are within the City's service area, which would require new infrastructure and upgrades to existing infrastructure to serve potable water to these locations. This would include new storage facilities and new pump stations. In addition to these developments, there are considerations of expansion to the Sphere of Influence using a separate water supply. According to the Folsom Specific Plan Area Water Supply Assessment, the City proposes securing an assignment of Sacramento River surface water supply from the Natomas Central Mutual Water Company (NCMWC) pursuant to NCMWC's CVP settlement contract with the United States Bureau of Reclamation.

## **C. Topography and Soils**

1. *Describe topography of the district and its impact on water operations and management*

The City is located in the northeastern portion of Sacramento County, on the edge of the Sierra Nevada foothills and the Central Valley adjacent to Folsom Lake. The City's elevations range from 100 to 800 feet above sea level with the majority of the area lying under 500 feet. The City lies within the American River watershed; except for a very small portion in the northwest area of the City, which flows to the Sacramento River via Linda Creek. The terrain is slightly hilly with drainage creeks and streams in each valley. The City utilizes the topography in its distribution system layout and has created seven pressure zones to minimize energy costs and maintain acceptable pressures to its customers.

## 2. Describe district's soil associations (Agriculture only)

There are no significant agriculture users in the City's service area.

## 3. Describe limitations resulting from soil problems (Agriculture only)

The surface water supply is imported from Folsom Reservoir, outside of the City's boundaries, and therefore the soil types present in the City have no impact on surface water operations or management.

### D. Climate

#### 1. Describe the general climate of the district.

The City's service area has cool and humid winters, and hot and dry summers. Sacramento's average daily temperature ranges from 38 to 93 degrees Fahrenheit, but the extreme low and high temperatures have been 16 and 115 degrees Fahrenheit respectively (Western Regional Climate Center). The historical annual average precipitation is approximately 24 inches. The rainy season begins in November and ends in March. Average monthly precipitation during the winter months is approximately 3.5 to 4.4 inches, but records show that the monthly precipitation has been as high as 10 inches and as low as 0 inches. Relative humidity in the region ranges from 29 percent to 90 percent. Low humidity usually occurs in the summer months, from May through September. The combination of hot and dry weather during the summers results in high water demands. Historical climate data is summarized below for Western Regional Climate Center's Folsom Dam station (043113).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg. Precip. (in.)	4.46	4.34	4.30	1.84	0.52	0.31	0.11	0.10	0.45	1.32	3.47	3.39	24.61
Avg. Temp. (F)	46.9	51.5	55.0	59.4	66.0	72.7	77.7	76.8	73.4	65.9	54.4	47.1	62.2
Avg. Max. Temp. (F)	54.5	60.8	65.1	71.5	80.2	88.5	94.8	93.6	88.6	78.6	63.7	55.2	74.6
Avg. Min. Temp. (F)	39.2	42.2	44.8	47.3	51.8	56.8	60.6	59.9	58.1	53.1	45.0	38.9	49.8
ETo <sup>7</sup>	1.59	2.20	3.66	5.08	6.83	7.80	8.67	7.81	5.67	4.03	2.13	1.59	57.06

Above data taken from: Western Regional Climate Center, Folsom Dam (043113) Year 1971 to Year 2000.

<sup>7</sup> Monthly ETo information obtained from CIMIS web site for the Fair Oaks Station 131, which has data collected since April 1997



*Predominant wind direction:* The average wind velocity and direction is 7.9 mph in the southwest direction.

*Average annual frost-free days:* There are on average 13 days with temperatures below 32 degrees Fahrenheit. The number of average annual frost-free days is 352.

2. *Impact of any microclimates on water management within the district.*

There are no microclimates within the City's service area.

**E. Natural and Cultural Resources**

1. *Provide the name of the natural resources area within the district.*

Mormon Island is within the City's service area.

2. *Describe management of these resources in the past or present by the City.*

The City does not provide water to Mormon Island.

3. *Provide the name of the recreational and/or cultural resources area.*

Not applicable.

**F. Operating Rules and Regulations**

1. *Attach a copy of the district's operating rules and regulations.*

The following is included in Attachment B.

- a. City of Folsom Charter
- b. City of Folsom Title 13 Table of Contents – Water and Sewage
- c. Chapter 13.22 Water System Cross Connection Control
- d. Chapter 13.24 Utilities Connections
- e. Chapter 13.26 Water Conservation
- f. Chapter 13.30 Water Impact Fee

2. *Describe the district's agricultural water allocation policy (Agriculture only).*

No Agriculture

3. *Describe official and actual lead times necessary for water orders and shut-off (Agriculture only).*

No Agriculture.

**4. Describe district's policies regarding surface and subsurface drainage from farms (Agriculture only).**

No Agriculture

**5. Describe district's policies on water transfers by the district and its customers.**

The City has established mutual aid agreements with various neighboring water utilities for which they share or are proposing to share emergency interconnections. These agreements are also used to periodically transfer water to meet special operations needs of each respective utility. A transfer agreement is amended to each respective mutual aid agreement. The transfer agreement includes items such as compensation, time of transfer, and place of transfer for each respective connection. See attachment J and attachment K for agreements between the City of Folsom and neighboring water utilities.

**G. Water Measurement, Pricing, and Billing**

**1. Agricultural Customers**

- a. Provide total number of farms: No Ag*
- b. Provide total number of delivery points: No Ag*
- c. Provide total number of delivery points serving more than one farm: No Ag*
- d. Provide total number of measured delivery points: No Ag*
- e. Provide percentage of delivered water that was measured at a delivery point: No Ag*
- f. Complete measurement device table. No Ag*

**2. Urban Customers**

- a. Provide total number of connections: 18,066*
- b. Provide number of metered connections: 18,066*
- c. Provide number of connections not billed by quantity: 16,432*
- d. Provide percentage of water that was measured at delivery point: 36.6%*
- e. Provide the percentage of water that was billed by quantity: 36.6%*

*f. Complete measurement device table.*

Currently, there is no scheduled meter testing and calibration program. Meters are currently read monthly. In 2007, the City of Folsom tested 60 residential water meters that were approximately fifteen (15) years old and found the accuracy to be within 98.5 %. The City's Fixed Network System will allow the City to track customer meters that have entered into leak mode and meter register malfunctions (such as negative consumption, zero reads, etc.). Manufacturer's literature for meter accuracy is shown in Attachment I. The table below only includes meters that are read and billed by quantity.

Meter Size and Type	Quantity	Accuracy (+/-Percentage)	Reading Frequency (Days)	Calibration Frequency (Months) <sup>8</sup>	Maintenance Frequency (Months)
5/8 X 3/4" and 1"	786	±1.5%	30	Every 15 years	As needed
1 1/2"	174	±1.5%	30	Every 10 years	As needed
2"	504	±1.5%	30	Every 10 years	As needed
3"	82	±1.5%	30	Every 10 years	As needed
4"	58	±1.5%	30	Every 10 years	As needed
6"	23	±1.5%	30	Every 10 years	As needed
8"	1	±1.5%	30	Every 10 years	As needed
10"	5	±1.5%	30	Every 10 years	As needed
12"	1	±1.5%	30	Every 10 years	As needed
Total	1,634	An additional 16,432 meters are installed but not read.			

### **3. Agriculture and Urban Customers**

*a. Describe the district's current year agriculture and/or urban water charges.*

There are no agricultural water customers.

For the City's urban water customers, the City's current rate structure is attached in Attachment C. The urban water charges are divided into metered residential, metered non-residential, and non-metered residential accounts. Non-metered residential accounts currently have a water meter, but are not billed based on consumption.

- Ashland Service Area – Base service charge plus commodity charge for usage
- Folsom Service Area – Flat rate and an additional surcharge for East Area customers only
- Non residential – Base service charge dependent on meter size plus commodity charge for usage

The non-metered rates may also include differences based on income level, types of homes, customers with additional lots or houses and customers with swimming pools as shown in

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<sup>8</sup> Based on the AWWA M6 Manual, *Water Meters – Selection, Installation, Testing, and Maintenance*

Attachment C. The City will begin billing all residential customers based on volumetric use by 2013.

*b. Annual charges collected from customers (2009 data)*

**Fixed Charges**

Customer Class	\$/Account	Total Accounts	Total Billed
Folsom Main East Area - SFR Surcharge	\$ 12.00	1,173	\$ 14,076.00
Folsom Main - Single Family Residential	\$ 33.55	14,576	\$ 489,024.80

**Volumetric Charges**

Customer Class	\$/CCF <sup>9</sup>	CCF Billed	Total Billed
Ashland - Commercial	\$ 0.95	59,197	\$ 56,237.51
Ashland - Condo/Townhome	\$ 0.88	28,565	\$ 25,137.20
Ashland - Multi Family Residential	\$ 0.88	80,974	\$ 71,257.11
Ashland - Municipal	\$ 0.95	2,246	\$ 2,134.09
Ashland - Single Family Residential	\$ 0.88	406,031	\$ 357,307.58
Ashland - Schools	\$ 0.95	7,375	\$ 7,005.87
Ashland - Landscape Irrigation	\$ 0.95	11,533	\$ 10,956.54
Folsom Main East Area - Commercial	\$ 0.95	608,009	\$ 577,608.17
Folsom Main East Area - Multi Family Residential	\$ 0.95	182,887	\$ 173,743.11
Folsom Main East Area - Municipal	\$ 0.95	65,394	\$ 62,124.27
Folsom Main East Area - Schools	\$ 0.95	29,702	\$ 28,216.71
Folsom Main East Area - Landscape Irrigation	\$ 0.95	569,848	\$ 541,355.84
Folsom Main - Commercial	\$ 0.95	1,855,427	\$ 1,762,656.10
Folsom Main - Multi Family Residential	\$ 0.95	435,348	\$ 413,580.56
Folsom Main - Municipal	\$ 0.95	142,154	\$ 135,046.36
Folsom Main - Schools	\$ 0.95	265,691	\$ 252,406.66
Folsom Main - Industrial	\$ 0.95	251,855	\$ 239,262.60
Folsom Main - Mobile Home Park	\$ 0.95	11,719	\$ 11,132.78
Folsom Main - Landscape Irrigation	\$ 0.95	539,099	\$ 512,143.98

*c. Describe District's water-use data accounting procedures*

Water use records are only kept for the customers with meters that are billed by a metered rate. In May 2010, the City completed its Meter Installation Project, which consisted installing approximately 5,400 residential water meters at homes that did not have a water meter. As the meter retrofit program is completed by 2013, all users will eventually be metered with water use data recorded. The meter retrofit program includes installing a fixed network unit on each meter. A fixed network system utilizes Gateway receivers to receive and transfer meter data from transmitters located at each water meter to a database. Therefore, the City has meters on all services, but not all meters are read and billed by quantity.

Water use data for metered customers will be maintained in the billing system database. Each metered customer's bill lists the meter values and water use for the current billing cycle, as

<sup>9</sup> 1 CCF = 100 cubic feet

shown on the attached sample bills in Attachment D. Metered customers may access their usage history by calling the City of Folsom for a complete listing. Also included in Attachment D is a typical residential non-metered customer bill. For a typical residential non-metered customer bill, water bills do not list comparative yearly-use data, nor do bills provide unit cost rates. The City will begin billing all residential customers based on volumetric use by 2013.

## **H. Water Shortage Allocation Policies**

### *1. Attach the district's current year water shortage policies.*

The City of Folsom has adopted by Ordinance 1118, Chapter 13.26 of the Folsom Municipal Code (FMC), Water Conservation. Chapter 13.26 establishes a five stage water conservation program with conservation goals and water use restrictions. In addition, the City of Folsom Water System Emergency Response Plan, December 28, 2004, identifies emergency resources and alternative and backup water sources. This plan is consistent with and incorporates provisions in the City of Folsom Emergency Operation Plan, 2004. Procedures for distribution of water during varying periods of outages or in a disaster are identified and are consistent with guidelines prepared by the California Office of Emergency Services (OES) and California Utilities Emergency Association. Both the City of Folsom Water System Emergency Response Plan, and the City of Folsom Emergency Operation Plan, due to their size, are not attached to this document but are available for viewing at the Folsom Water Treatment Plant.

The City of Folsom's water shortage contingency plan which is summarized in the FMC Chapter 13.26 has five stages of conservation, each of which is intended to achieve a given percentage reduction in water use. Decreases in available water, as determined by the City Manager, increase the Water Conservation Stage identify additional water use restrictions which may be augmented by other restrictions as deemed necessary. The five stages and their conservation goal relative to the base stage are as listed below:

- Stage one ("Basic Stage") is for the normal water supply
- Stage two ("Water Alert") shall achieve a 12 % reduction
- Stage three ("Water Warning") shall achieve a 20% reduction
- Stage four ("Water Crisis") shall achieve a 35% reduction
- Stage five ("Water Emergency") shall achieve a 50% reduction

As the conservation stages increases, non health and safety uses of water such as landscape watering are limited and then eliminated. The contingency plan also identifies and prioritizes water uses to support water shortage use policies. The Water Shortage Contingency Plan is presented in Attachment E.

### *2. Attach the district's current year policies that address wasteful use of water.*

The City's ongoing water conservation efforts are directed at compliance with the Best Management Practices (BMPs) of the California Urban Water Conservation Council. Wasteful use of water and the acts or omissions, whether intentional, unintentional, willful or negligent, are defined in the City's adopted Water Conservation Ordinance. Enforcement and penalties for the wasteful use of water, which are applicable during all stages of conservation, are specified in

the Ordinance. A copy of the city ordinance, Chapter 13.26 Water Conservation, is located in Attachment B.

## Section 2: Inventory of Water Resources

### A. Surface Water Supply

1. *Acre-foot amounts of surface water delivered to the district by each of the district's sources.*

Below are two tables, one for the Ashland Service Area and one for the Folsom Main Service Area. Each service area operates under a separate California Department of Public Health Purveyor number.

#### Surface Water Supply for the Ashland Service Area<sup>10</sup>

2009 Month	Federal Urban Water – Contract W1373 <sup>11</sup> (acre-feet)	Federal Agric. Water (acre-feet)	State Water (acre-feet)	Local Water – Contract 152A <sup>12</sup> (acre-feet)	Total (acre-feet)
January	0	0	0	53	53
February	0	0	0	177	177
March	0	0	0	148	148
April	0	0	0	109	109
May	0	0	0	139	139
June	0	0	0	183	183
July	0	0	0	205	205
August	0	0	0	201	201
September	0	0	0	175	175
October	0	0	0	115	115
November	0	0	0	81	81
December	0	0	0	61	61
TOTAL	0	0	0	1,647	1,647

<sup>10</sup> The City of Folsom has a wholesale water supply agreement with San Juan Water District to serve potable water to the Ashland Service Area under CDPH Purveyor No. 3410030

<sup>11</sup> Water use from SJWD Contract No. 6-07-20-W1373-LTR1 (CVP). CVP water in 2009 is zero.

<sup>12</sup> Water use from SJWD Contract No. 14-06-200-152A (Pre-1914).

**Surface Water Supply for the Folsom Main Service Area<sup>13</sup>**

<b>2009 Month</b>	<b>Federal Urban Water- Contract 1372<sup>14</sup> (acre-feet)</b>	<b>State Water (acre-feet)</b>	<b>Local Water – Contract 5515A<sup>15</sup> (acre-feet)</b>	<b>Local Water – Contract 4816A<sup>16</sup> (acre-feet)</b>	<b>Total (acre-feet)</b>
January	0	0	1,250	21	1,271
February	0	0	1,079	0	1,079
March	0	0	1,210	186	1,396
April	0	0	1,430	515	1,945
May	105	0	1,941	253	2,299
June	125	0	2,137	400	2,662
July	155	0	2,555	500	3,210
August	155	0	2,409	600	3,164
September	125	0	2,192	500	2,817
October	100	0	1,644	400	2,144
November	80	0	1,213	400	1,693
December	70	0	888	425	1,383
<b>TOTAL</b>	<b>915</b>	<b>0</b>	<b>19,948</b>	<b>4,200</b>	<b>25,063</b>

<sup>13</sup>This includes potable water supplied under CDPH Purveyor No. 3410014 and raw water delivered to Aerojet

<sup>14</sup> City of Folsom subcontract with SCWA for Contract No. 6-07-20-W1372 (CVP)

<sup>15</sup> City of Folsom Contract No. 14-26-200-5515A (Pre-1914)

<sup>16</sup> City of Folsom Contract No. 14-06-200-4816A (Pre-1914)



**Amount of water received under each right and/or contract for the last 10 years.**

<b>Year</b>	<b>Federal Urban Water Contract W1373<sup>17</sup> (acre-feet)</b>	<b>Federal Urban Water Contract W1372<sup>18</sup> (acre-feet)</b>	<b>State Water (acre-feet)</b>	<b>Local Water Contract 152A<sup>19</sup> (acre-feet)</b>	<b>Local Water Contract 5515A<sup>20</sup> (acre-feet)</b>	<b>Local Water Contract 4816A<sup>21</sup> (acre-feet)</b>	<b>Total (acre-feet)</b>
2000	300	0	0	1,024	18,908	0	20,232
2001	293	0	0	845	21,000	0	22,138
2002	269	0	0	882	22,000	1,549	24,698
2003	155	0	0	952	22,000	4,373	27,480
2004	176	0	0	1,239	22,000	4,964	28,379
2005	290	0	0	1,271	22,000	2,889	26,450
2006	243	0	0	1,452	22,000	4,826	28,521
2007	398	0	0	1,422	22,000	4,759	28,579
2008	314	187	0	1,294	21,707	5,804	29,306
2009	0	915	0	1,647	19,948	4,200	26,710
<b>TOTAL</b>	<b>2,438</b>	<b>1,102</b>	<b>0</b>	<b>12,028</b>	<b>213,563</b>	<b>33,364</b>	<b>262,495</b>
<b>Average</b>	<b>244</b>	<b>110</b>	<b>0</b>	<b>1203</b>	<b>21,356</b>	<b>3,336</b>	<b>26,250</b>

**B. Ground Water Supply**

*1. Acre-foot amounts of ground water pumped and delivered by the district.*

The City of Folsom does not currently pump groundwater for delivery, and groundwater supplies within the City of Folsom are considered to be limited. This limitation was validated in the City's 2006 Groundwater Resources Study prepared by Brown & Caldwell. The City's 2006 Groundwater Resources Study prepared by Brown & Caldwell indicates that the area from which groundwater can be produced in significant quantities are less than half of the total area of the incorporated city. In particular, the areas underlain by relatively impermeable Mesozoic bedrock has little or no potential for significant well yields. The alluvial aquifer that underlies a portion of the City is fairly thin. Therefore, its operable capacity is somewhat limited. Based on the conceptual hydrogeologic model of deposits in the study area, groundwater in much of the eastern part of the study area could be subject to natural depletion due to natural drainage from downslope flow and stratigraphic control (sloping bedrock contact), especially during periods of drought.

*2. Ground-water basin(s) that underlies the district.*

Not applicable

<sup>17</sup> Water use from SJWD Contract No. 6-07-20-W1373-LTR1 (CVP).

<sup>18</sup> City of Folsom subcontract with SCWA for Contract No. 6-07-20-W1372 (CVP).

<sup>19</sup> Water use from SJWD Contract No. 14-06-200-152A (pre-1914).

<sup>20</sup> City of Folsom Contract No. 14-06-200-5515A (Pre-1914).

<sup>21</sup> City of Folsom Contract No. 14-06-200-4816A (Pre-1914).

3. *Contractor operated wells and managed groundwater recharge areas.*

Not applicable

4. *If there is conjunctive use of surface and ground water, describe it.*

Not applicable

5. *For managed ground-water basins, attach a copy of the management plan.*

Not applicable

6. *For participation in ground-water banking, attach a description of the banking plan.*

Not applicable

### **C. Other Water Supplies**

1. *Acre-foot amounts of “Other” water used as part of the district’s water supply.*

There are no “Other” sources for water used as part of the district’s water supply.

### **D. Source Water Quality Monitoring Practices**

1. *Potable water quality (Urban only).*

The annual consumer confidence report is attached in Attachment F. The report summarizes the surface water quality testing results. There are no current water quality concerns and/or problems.

2. *Agricultural districts:*

Not Applicable

3. *Description of the current water quality testing program and the role of each participant in the program.*

The City of Folsom’s water quality sampling requirements are mandated under Title 22 of the California Code of Regulations. The City’s Water Quality Division and Water Treatment Plant staff collect the samples for the categories listed below. In addition to State and Federal Regulations, the City performs supplemental monitoring to obtain additional information on system operation and to help assess any water quality concerns. This monitoring includes Heterotrophic Plate Count samples when new water lines are added to the system or system repairs are conducted.

Category	Sampling Frequency	Sampling Location
Inorganic compounds <sup>22</sup>	Quarterly and annually	Upstream of the entrance to water distribution system
Volatile organic compounds	Annually	Raw water intake to WTP
Synthetic organic compounds	2 quarters per 3 year period	Raw water intake to WTP
Radionuclides	Every 9 years	Raw water intake to WTP
Disinfectants and Disinfection By-Products <sup>23</sup>	Weekly, quarterly, and monthly	Various locations within the distribution system
Coliforms	Weekly	Various location within the distribution system
Lead and Copper	Every 3 years	Various locations within the distribution system
Secondary contaminants	Annually	Upstream of entrance to distribution system

*4. Current year water quality monitoring programs.*

There are not any current water quality concerns and/or problems.

**E. Water Uses within the District**

***1. Agricultural***

No agriculture.

***2. Types of irrigation systems used for each crop***

No agriculture.

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<sup>22</sup> General inorganic compounds are sampled annually, nitrates and nitrites are sampled quarterly, and asbestos every nine years

<sup>23</sup> Free chlorine is tested weekly, Total organic carbon is tested monthly, and Total Trihalomethanes and Haloacetic Acids are tested quarterly

### 3. Urban use by customer type in current year

Currently, the City of Folsom does not bill all residential homes on a metered rate. Therefore, the determination of use for single-family residential homes cannot be accurately calculated. In previous reports to the CUWCC, unaccounted for water was listed as 10%. By using the total water provided to metered accounts, a 10% unaccounted for water amount, the City calculated water use for the single-family residential accounts.

Customer Type	Number of Connections	Year 2009 Use (AF)
Single-family <sup>24</sup>	16,513	12,326
Multi-family	343	1,085
Commercial	761	2,716
Industrial	5	1574
Institutional	43	45
Landscape irrigation	400	3271
Wholesale	0	0
Reclaimed	0	0
Other <sup>25</sup>	1	3,022
Subtotal	18,066	24,039
Unaccounted for (10%)	--	2,671
Total	18,066	26,710

### 4. Urban Waste Water Collection and Treatment Systems serving the district service area.

The Sacramento Regional County Sanitation District (SRCSD) is responsible for the transmission, treatment, and disposal or reuse of the wastewater generated in the City. The City owns and operates the local collection system. The wastewater is collected by gravity in a series of main, trunk, and interceptor sewers. Collected wastewater is transported to the Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove. The regional plant serves the entire Sacramento metropolitan area including the unincorporated county areas adjacent to the Cities of Sacramento, Citrus Heights, Elk Grove, Rancho Cordova as well as the City of Folsom (City).

Treatment Plant	Treatment Level (1, 2, 3)	Year 2009 (AF) <sup>26</sup>	Disposal to
SRWTP	2	168,033	Sacramento River
SRWTP (Reclaimed Water)	3	958	Sacramento County Water Agency and SRWTP
	Total	168,991	
Total discharged to ocean	Saline sink	0	

<sup>24</sup> Metered water usage only collected for the Ashland Service Area

<sup>25</sup> One account for raw water delivery to Aerojet

<sup>26</sup> Information obtained from the 2009 SRCSD State of the District Report

5. *Ground-water recharge/management/banking*

Not applicable.

6. *Transfers and Exchanges*

*No transfers or exchanges into or out of the district*

7. *Wheeling and other transactions*

From Whom	To Whom	Year	(AF)	Use
SJWD	City of Folsom	2009	1,647	Wholesale water contract to supply Ashland area of City. <sup>27</sup>

8. *Any other uses of water.*

There were no other uses of water by the City.

**F. Outflow from the District (Ag only)**

No agriculture.

**G. Water Accounting (Inventory)**

See Attachment G for completed Urban Water Tables 1-8.

1. *Quantify district's water supplies.*

- a. Surface water supplies, imported, and originating within the district, by month (Table 1).
- b. Ground water extracted by the district, by month (Table 2).
- c. Effective precipitation by crop (Ag Table 5).
- d. Estimated annual ground water extracted by non-district parties (Ag Table 2).
- e. Recycled urban wastewater, by month (Table 3).
- f. Other supplies, by month (Table 3).

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<sup>27</sup> This is potable water served to the City's Ashland Service Area by San Juan Water District. See Attachment J – San Juan Water District and City of Folsom Wholesale Water Supply Agreement.

## 2. *Quantify water used.*

- a. *Agricultural conveyance losses, including seepage, evaporation, and operational spills in canal systems (Table 4) or Urban leaks, breaks and flushing/fire uses in piped systems (Table 4)*

The City's entire system is not metered, and therefore it is not possible to accurately calculate system losses. Values listed in Table 4 are estimated.

- b. Consumptive use by riparian vegetation (Table 6).
- c. Applied irrigation water - crop ET, water used for leaching, and cultural practices (e.g., frost protection, soil reclamation, etc.) (Table 5).
- d. Urban water use (Table 6).
- e. Groundwater recharge (Table 6).
- f. Water exchanges and transfers (Table 6).
- g. Estimated deep percolation within the district (Ag Table 7).
- h. Agricultural flows to perched water table or saline sink (Ag Table 7).
- i. Agricultural irrigation spills or drain water leaving the district (Table 6).
- j. Other (Table 6).

## 3. *Overall Water Inventory*

The City is currently not able to calculate how much water is actually delivered to the customer side of the connection due to incomplete metering data. In May 2010, the City completed its Meter Installation Project, which consisted installing approximately 5,400 residential water meters at homes that did not have a water meter. As the meter retrofit program is completed by 2013, all users will eventually be metered with water use data recorded. The meter retrofit program includes installing a fixed network unit on each meter. A fixed network system utilizes Gateway receivers to receive and transfer meter data from transmitters located at each water meter to a database. Therefore, the City has meters on all services, but not all meters are read and billed by quantity. The City plans to bill all residential customers based on volumetric use by 2013. Therefore, the water inventory calculation in Table 6 is not complete.

## **H. District Quantifiable Objectives (QOs)**

The City of Folsom is not a participant related to the Quantifiable Objectives identified in the Planner, Chapter 10.

### **Section 3: Best Management Practices (BMPs) for Agricultural Contractors**

There are no irrigation contracts in the City.





## Section 4: BMPs for Urban Contractors

This section includes past, current, and future best management practices (BMPs) expenditures for the City of Folsom water conservation efforts. Included in Appendix L, M, and N are the City's 2008, 2009, and 2010 California Urban Water Conservation Council (CUWCC) Annual Reports.

### A. Urban BMPs

#### 1. Utility Operations

##### 1.1 Operations Practices

###### 1.1.1 Conservation Coordinator

The City of Folsom created the Water Management Coordinator position in December of 2000 to oversee water conservation activities. The position is a permanent full time position. The coordinator is required to possess a Water Conservation Practitioner certification from the AWWA and be an Irrigation Association Certified Landscape Irrigation Auditor. The coordinator's background includes experience in landscape, horticulture, irrigation, plumbing, public speaking, and administrative or business management.

- ◆ The City of Folsom's Water Management Coordinator is Don Smith.
- ◆ Experience
  - Landscape contractor
  - Irrigation technician
  - Plumbing
  - Public speaking
  - Water Conservation Practitioner
  - Certified Landscape Irrigation Auditor
  - Owned and operated a landscape service

Table 4-1. City of Folsom Water Conservation Staffing Levels

Water Conservation Staffing Level							
	2009	2010	2011	2012	2013	2014	2015
Full-time positions	2	3	3	3	3	3	3
Full/part-time staff	0	0	0	0	0	0	0

###### 1.1.2 Water waste prevention

The City of Folsom has adopted by Ordinance 1118, Chapter 13.26 of the Folsom Municipal Code (FMC), Water Conservation. Chapter 13.26 establishes a five stage water conservation program with conservation goals and water use restrictions. In addition, the City of Folsom Water System Emergency Response Plan, December 28, 2004, identifies emergency resources and alternative and backup water sources. This plan is consistent with and incorporates provisions in the City of Folsom Emergency Operation Plan, 2004. Procedures for

distribution of water during varying periods of outages or in a disaster are identified and are consistent with guidelines prepared by the California Office of Emergency Services (OES) and California Utilities Emergency Association. Both the City of Folsom Water System Emergency Response Plan, and the City of Folsom Emergency Operation Plan, due to their size, are not attached to this document but are available for viewing at the Folsom Water Treatment Plant.

The City of Folsom's water shortage contingency plan which is summarized in the FMC Chapter 13.26 has five stages of conservation, each of which is intended to achieve a given percentage reduction in water use. Decreases in available water, as determined by the City Manager, increase the Water Conservation Stage indentify additional water use restrictions which may be augmented by other restrictions as deemed necessary. The five stages and their conservation goal relative to the base stage are as listed below:

- ◆ Stage one ("Basic Stage") is for the normal water supply
- ◆ Stage two ("Water Alert") shall achieve a 12 % reduction
- ◆ Stage three ("Water Warning") shall achieve a 20% reduction
- ◆ Stage four ("Water Crisis") shall achieve a 35% reduction
- ◆ Stage five ("Water Emergency") shall achieve a 50% reduction

As the conservation stages increases, non health and safety uses of water such as landscape watering are limited and then eliminated. Enforcement and penalties for the wasteful use of water, which are applicable during all stages of conservation, are specified in the Ordinance.

#### 1.1.3 Wholesale agency assistance program

The City of Folsom is solely a retail water supplier, and this program does not apply.

### 1.2 Retail Conservation Pricing

Metered billing would begin in January 2013 for all residential customers currently on a flat rate for water service. During the preparation of this report, the City was developing City-wide water meter rates for all residential and non-residential customers within the City's water service area. All industrial and commercial connections are currently metered with water use charges.

Most residential connections are not currently metered, except for those in the Ashland Water Service Area. Because conservation pricing requires a volumetric rate, all water services need to be metered and billed based on consumption. As mentioned above, the City will develop water meter rates for all customers. In an effort to develop conservation pricing, the City of Folsom plans to create a tiered rate structure for all metered customers, which will apply in January 2013.

### **1.3 Metering with commodity rates for all new connections and retrofit of existing connections**

In 2007, the City completed a Water Meter Implementation Plan to facilitate compliance with state law and to ensure a smooth and cost-effective implementation of a water metering program for the City. Implementation of the Folsom water metering program will primarily involve installing individual water meters at existing homes without meters, reading of installed meters, and a transition from monthly flat rate billing to monthly billing based on metered consumption.

In 2009, the City of Folsom completed the installation of approximately 5,400 residential water meters on homes built prior to 1992. During the installation of water meters, the City also selected and began the installation of a fixed network meter reading system. This system uses a remote radio transmitter on the meter to send meter reading information to a main database.

The City of Folsom requires meters to be installed for all new connections, and bills on a volumetric basis for commercial, industrial, institutional, and multi-family customers. For the customers that are not currently billed by volumetric use, the City plans to provide one year of comparative meter reading data, beginning in January 2012. Metered billing would begin in January 2013 for all residential customers currently on a flat rate for water service. During the preparation of this report, the City was developing City-wide water meter rates for all residential and non-residential customers within the City's water service area.

### **1.4 Water Loss Control**

The City plans to fully implement this BMP when meter coverage is sufficient to allow for meaningful results from meter data. As discussed above, full metering will occur during the planning horizon of this document (January 2013). During the 2011 Calendar Year, the City will also install three (3) new zone meters at the City's water treatment plant to improve meter reading efficiencies for treated water entering the City's distribution system.

In January 2011, the City of Folsom, under a contract with Water System Optimization, Inc. (WSO), began a 2-Year Water Management Control Program. This water management control program is the foundation of the City's System Optimization Review (SOR), as it helps identify areas of conserved water and improves system efficiencies. The goal of these efforts is to ensure the long-range reliability of water supply for the region, as well as preserving our natural resources and the American River. The program consists of the following:

- ◆ Perform an initial comprehensive leak detection campaign using portable acoustic leak detection equipment of the entire water distribution system; (276 miles)
- ◆ Convert the water pressure zones 1-7 into District Metering Areas (DMAs) which allows for specific monitoring locations within the distribution system;

- ◆ Compare the water usage for each of the DMAs and potential system improvements;
- ◆ Develop system pressure management strategies;
- ◆ Quantify potential water savings;
- ◆ Design and implement a data analysis and water management system for the City;
- ◆ Establish water management, data handling, and data management systems to track long-term measurable results

Throughout the two-year water management control program WSO will continuously train City of Folsom personnel on water loss management activities, data handling, data management, and data analysis. WSO will provide the City with clear procedures on how to manage and analyze the data necessary for a successful non-revenue water control program. Extensive training will be provided on the use of the DMA data and non-revenue water monitoring system designed and implemented by WSO.

WSO will manage the entire water management control program in conjunction with the City. WSO will prepare a detailed final report at the end of the water management control program period that describes in detail all the work undertaken, the methodologies used, the findings of the program and recommended strategy for continued non-revenue water management by the City. The final report will be submitted in PDF format and will document all data collected and work performed. See **Figure 4-1** and **Figure 4-2** for the proposed schedule of the 2-Year Water Management Control Program.

The proposed water management control program will potentially achieve a savings of approximately 2,500 acre-feet of water per year. The results of this water management control program will also place the City in a position for future grant opportunities through the Bureau's Water Marketing and Efficiency Grant program.

Task	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
Project Kick Off												
Initial Comprehensive Leak Detection Campaign												
Field Tests to Verify Zone Integrity of Zone1 and 4,5,6												
Convert Zone1 and 4,5,7 Into Permanent DMAs												
Initial Leakage Level Measurement in DMA Zone1 and 4,5,6												
Comparison of Initial DMA Leakage Levels Against Water Audit Results												
Quantify Savings Achieved Through First Round of Leak Detection												
Design and Pilot Leakage Monitoring System for DMA Zone1 and 4,5,6												
Second Round of Comprehensive Leak Detection Campaign												
Final leakage level measurement in DMA zone 1 and zone 4,5,6												
Quantify Savings Achieved Through Second Round of Leak Detection												
Calculate Background Leakage in DMA Zone1 and 4,5,6 and Extrapolate to Rest of System												
Convert Zone 2 and 3 Into Permanent DMAs												
Design Data Analysis and Management System for Leakage Monitoring in All DMAs												
Collect and Then Evaluate Pressure and Flow Data From All DMAs												
Training of COF Personnel on Water Loss Management, Data Handling and Data Management												
Project Management of Entire Water Loss Control Program												
Preparation of Monthly Progress Reports												

**Figure 4-1. Tasks for Year 1 of the Water Management Control Program**

Task	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
Assess Potential for Subdividing Zone 2 into two DMAs and Subdivide if Possible												
Collect and Then Evaluate Pressure and Flow Data From All DMAs												
Design Advanced Pressure Management Schemes												
Pilot Advanced Pressure Management in One DMA												
Full Scale Implementation of Advanced Pressure Management												
Calculate Economic Leakage Intervention Levels of Each DMA												
Training of COF Personnel on Water Loss Management, Data Handling and Data Management												
Project Management of Entire Water Loss Control Program												
Preparation of Monthly Progress Reports												

**Figure 4-2. Tasks for Year 2 of the Water Management Control Program**

## 2. Education Programs

### 2.1 Public Information Programs

The City of Folsom maintains an active public information campaign to promote and educate customers regarding water conservation and efficient irrigation, including:

- ◆ Provision of speakers to employee, community and media groups to promote conservation
- ◆ Paid Advertising
- ◆ Bill inserts/newsletters/brochures
- ◆ Highlighting water usage on water bills
- ◆ Coordination with other government agencies, industry groups, public interest groups, and media to promote conservation efforts regionally

During the 2010 Calendar Year, the City of Folsom staff participated in 22 presentations special events with a total of 6,680 attendees. **Table 4-2** highlights specific 2010 outreach activities and workshops presented by the City of Folsom. Since water savings for this DMM is difficult to quantify, the City will begin reporting to the CUWCC using the gallons per capita per day, or GPCD method. At the time this report was prepared, the CUWCC reporting tables and documents were not available.

The City fully participates in the Regional Water Efficiency Program (RWE) Public Information Campaign. The Regional Water Efficiency Program has a regional outreach program coordinated with support from a Public Outreach and School Education Committee comprised of RWE member conservation coordinators and Public Information Officers.

**Table 4-2. City of Folsom workshops and attendance.**

<b>Date</b>	<b>Event</b>	<b>Topic</b>	<b>Number of Attendees</b>
2/6/2010	FOHC Workshop	Water Efficient Irrigation	30
3/10/2010	SJUSD Adult Ed Hort Class	Water Efficient Irrigation	15
3/25/2010	Rules of Thumb Workshop #1	Water Efficient Landscaping	56
4/22/2010	Western Power Admin. Earth Day Event	Water Conservation	40
4/22/2010	Western Power Admin. Earth Day Event	Water Conservation	40
4/24/2010	Hinkle Creek Earth Day Event	Water Conservation	250
4/25/2010	Folsom Garden Club Tour	Water Conservation	300
4/29/2010	Rules of Thumb Workshop #2	Water Efficient Landscaping	55
5/1/2010	Get Wet	Water Conservation	200
5/8/2010	Home Depot Event	Water Conservation	50
5/25/2010	Rotary Luncheon	Water Conservation	22
5/27/2010	Rules of Thumb Workshop #3	Water Efficient Landscaping	53
6/24/2010	Rules of Thumb Workshop #4	Water Efficient Landscaping	61
8/7/2010	Harvest Day	Water Efficient Landscaping	100
8/7/2010	Harvest Day	Water Efficient Landscaping	2,000
9/1/2010	Green Gardener Irrigation Class	Irrigation	16
9/16/2010	RFL Workshop #1	Irrigation	22
10/2/2010	FOHC Workshop	Irrigation	26
10/2/2010	Folsom Family Expo & Wellness Festival	Water Conservation	3,250
10/2/2010	Hinkle Creek WEL Garden Event	Water Efficient Landscaping	28
10/9/2010	RFL Workshop #2	Irrigation/Water Efficient Landscaping	54
11/29/2010	Renaissance HOA Board Meeting	Water Conservation/Meters/Rebates	12

In 2005, the Regional Water Efficiency Program developed a new logo and theme for the “Be Water Smart” public information campaign. To kick off the campaign, RWA undertook a host of outreach activities including a region-wide “Ultimate Garden Makeover Contest” in 2008 and 2009. Overall, goals of the Be Water Smart program are to:

- ◆ Increase the number of Water-Wise House Call requests
- ◆ Increase visibility for RWA’s water conservation messages in the local media
- ◆ Drive traffic to the RWA website and Be Water Smart hotline

In 2010, the Regional Water Authority (RWA) and 19 local water providers announced a new public outreach and advertising campaign called “Blue Thumb”. The campaign is designed to help residents use less water outdoors. With the Sacramento region's hot, dry climate and long summer season, more than 65 percent of a household's yearly water consumption typically goes toward landscape irrigation. Of that, 30 percent is lost due to overwatering or

evaporation, and is the target of the campaign messaging with the call for customer behavioral changes in watering practices.

#### Goals for the Regional Public Information Campaign

- ◆ Raise awareness about the need to use water efficiently outdoors.
- ◆ Motivate target audience to undertake key behaviors that are most likely to reduce outdoor water use.

#### Target Audience for the Regional Public Information Campaign

- ◆ Residential water customers within the RWEPP participant area.
- ◆ In particular, RWA and ACWA surveys show women over age 50 are most willing to adopt water-efficient behaviors

The ongoing regional campaign shows residents how to use water efficiently outdoors through every-day tasks such as adjusting their irrigation system according to the season or using a shut-off nozzle on their hose. It stars well-known community influencers, including Sacramento Mayor Kevin Johnson, Meteorologist Elissa Lynn and Dinger of the Sacramento River Cats, plus six local residents showing off their “Blue Thumb” and demonstrating how they made a personal commitment to use water wisely.

The Blue Thumb Campaign has a web site ([BeWaterSmart.info](http://BeWaterSmart.info)) where visitors can take the pledge to use water wisely and view video clips from spokespersons, such as Sacramento Mayor Kevin Johnson, and campaign participants explaining how they earned their Blue Thumb. The web site has been expanded to be a more comprehensive water conservation related site.

RWA provides avenues and tools for program participants to carry the Blue Thumb campaign in their own outreach efforts. Tools include key messages, Web site/newsletter text, bill insert template, Blue Thumb pledge and collateral materials. Outreach avenues include the opportunity to nominate customers to star in the outreach campaign, participation in the Home Depot partnership by featuring their logo on the in-store banners and connecting with customers at events. One water provider whose customer was selected to star in television advertising posted the customer’s Blue Thumb interview to YouTube with a link to their Web site. Others included campaign information on their Web sites, newsletters, billing envelopes and “on-hold” phone messages, as well as collected pledges via the form or pledge banner at community events.

The following marketing strategies were used as tactics to meet the goals of the Public Information Campaign. Specifically for the program, tactics used in the period of 2005-2009 included:



- ◆ Planned and executed the 2008 and 2009 Ultimate Water Smart Garden Makeover Contest as a regional media event which included a full remake of the winner's front yard landscape with donated time and materials worth \$40,000
- ◆ Public service announcements (hundreds of airings on radio and TV)
- ◆ Paid advertisements (print ad, television segments)
- ◆ Manage Be Water Smart hotline, 1-888-WTR-TIPS
- ◆ 5 Be Water Smart e-blasts to 40,000 people
- ◆ Participation at public events
- ◆ Bill inserts, brochures (e.g. River-Friendly Landscaping and Rules of Thumb for Water Wise Gardening)
- ◆ Demonstration garden support to the Fair Oaks Horticulture Center managed by the Sacramento County University of California Cooperative Extension (UCCE)
- ◆ Develop partnerships for co-promotion of programs including the following agencies:
  - Sacramento Municipal Utility District (SMUD)
  - Sacramento Regional County Sanitation District (SRCSD)
  - Sacramento Area Water Forum
  - Sacramento Bee
  - Sacramento Stormwater Quality Partnership
  - University of California Cooperative Extension

In addition, the tactics to meet the 2011 and future goals of the revised Public Information campaign include:

- ◆ Campaign web site (BeWaterSmart.info) where visitors can take the pledge to use water wisely and view video clips from campaign participants explaining how they earned their Blue Thumb
- ◆ A statistically valid telephone survey completed in 2009 of 604 adults to provide insight into attitudes, behaviors, messages and methods of communication. The survey will be repeated in September 2011 to evaluate the campaign.
- ◆ A unique and eye-catching campaign graphic identity
- ◆ Media outreach to announce the campaign and promote the opportunity for residents to star in advertising, as well as a campaign launch press event
- ◆ Television and radio advertising (paid) on KOVR (CBS TV), Comcast Cable, Capitol Public Radio and Clear Channel radio stations

- ◆ Public Service Announcements (PSAs) (no-cost placement) distributed to television and radio stations throughout the Sacramento region
- ◆ Promotional partnership with WaterSense and 16 Home Depots throughout the Sacramento region for Water Awareness Month in May. This included training by RWA on water efficient topics for Home Depot associates, promoting RWA's "Top 10 List" of water efficient products either via end-cap displays or table displays, in-store banners promoting Water Awareness Month and events where water providers connected with customers at Home Depot stores
- ◆ Partnership with the Sacramento River Cats (Sacramento's popular minor league baseball team) and Save Our Water that included placing water efficiency advertisements in 110 bathroom stalls at Raley Field, a blast e-mail by the Sacramento River Cats to 1,700 fans promoting the Blue Thumb Web site pledge and inclusion of a promotional flyer in 1,000 Save Our Water totes distributed at the California State Fair
- ◆ Collateral materials such as garden gloves, lawn signs, pledge banner and T-shirts with the Blue Thumb logo as an incentive for taking the Blue Thumb pledge online or at events

RWA also hosts a Speakers Bureau. For example in 2009-11, speaking engagements included the following by RWA staff and by Regional Water Efficiency Program participants from the Cities of Folsom and Roseville:

- ◆ Northern California Ace Hardware stores on regional water efficiency programs, Home Depot associates on water efficient products, rebates, and Water Awareness Month, LOWE's stores throughout the region on water efficient products, rebates, and Water Awareness Month promotion, Rainbird Training Academy on local efforts of AB1881, UC Davis WaterWise Symposium on Blue Thumb campaign and local efforts of AB1881, Association of Professional Landscape Architects on local landscape programs, Association of Professional Landscape Designers on local efforts of AB1881 and River Friendly Turf Management Workshop on local agency landscape efficiency rebate program
- ◆ California Green Summit on future green jobs in the water industry, River Friendly Landscaping Homeowner Workshop Series on irrigation efficiency, irrigation controller scheduling, water efficiency in the landscape, Raley Field Turf Management Workshop on RWA programs
- ◆ Department of Water Resources training on local agency implementation of AB1881, California Association of Public Information Officials state conference about Blue Thumb Neighbors

In the future, RWA will continue to work with participating agencies on a regional outreach message appropriate for the current year's water outlook. RWA will continue to provide key messages and update water provider tools as necessary, track the number of media stories (or hits), interviews conducted, and number of impressions of audience viewings. After the first year of the "Blue Thumb" program, results were tracked for 2010 and include the following outcomes:

- ◆ Nearly 30 earned media hits covering topics such as the campaign announcement/search for residents to participate, campaign launch, Home Depot events/Water Awareness Month and Blue Thumb Web site pledge.
- ◆ Interviews on multiple public service radio programs, including Clear Channel (where the host even took the Blue Thumb pledge on the air!) which broadcast on five local stations and Family radio, which aired on two local stations
- ◆ Nearly 3.9 million impressions via paid television advertising and 6.3 million impressions via paid radio advertising
- ◆ More than 1.2 million impressions for the (no-cost) television PSA (worth an estimated \$24,500) and over 3 million impressions for the radio PSA (worth an estimated \$96,264)

The general schedule for the regional public information campaign follows the annual calendar with the following seasonal activities:

Winter – planning for upcoming year's activities, continue to promote participation in the City's programs, such as high efficiency toilet and clothes washer rebates.

Spring – ramping up messaging and strong focus in soliciting media coverage and paid advertising in support of May as Water Awareness Month. Messaging surrounds the traditional spring planting season and checking of irrigation systems as they are turned on and taking the "Blue Thumb Pledge" to lower outdoor water use this season.

Summer – key messaging hits on the issues of efficient irrigation techniques, avoiding water waste, and lowering peak demands on hot summer days.

Fall – participating in local Harvest day events and providing efficient landscape irrigation trainings for professionals that focus on selecting more water efficient plants and irrigation equipment, and when the weather cools and rains return, then messaging calls for shutting down irrigation systems for the winter months.

The implementation schedule for 2011-2015 includes plans to continue to promote water conservation through the Regional Water Efficiency Program's outreach program supplemented by our own City outreach efforts. In addition, the City will continue to support community events similar to those conducted in the past as described above. The annual budget for direct expenses to continue with the regional outreach campaign is planned for 2011-2015 to be \$160,000 each fiscal year.

RWA will conduct an evaluation on a minimum of a bi-annual basis to determine the campaign's effectiveness using the following means:

- ◆ Statistically valid post-campaign telephone survey (results compared to 2009 pre-campaign survey responses).
- ◆ Tracking of pledges secured both online and by individual RWEF member utility efforts.
- ◆ Web site analytics analysis.
- ◆ Tracking water provider materials that carry Blue Thumb messages.
- ◆ Media and online mentions and content analysis of hits.
- ◆ Impressions for television and radio advertising and public service announcements
- ◆ Impressions for partner activities (such as the Sacramento River Cats).

For the Community Based Social Marketing (CBSM) program: Internet/written surveys (and potentially informal phone interviews) and water use data tracking. In the future, RWA will conduct another random survey of Sacramento area residents, which will seek to measure if the following goals for the campaign are being achieved:

- ◆ Increase the number of residents willing to utilize various yard design and maintenance practices promoted by the campaign.
- ◆ Increase the number of residents who say they have adopted yard design and maintenance practices promoted by the campaign.
- ◆ Increase the number of residents that have seen, read or heard news stories, public information, advertisement or other messages regarding water efficiency in the past six months.
- ◆ Increase the number of residents naming key messages promoted by the campaign in verbatim responses about the advertising or messages they heard.

Based on the results of the post-campaign survey, RWA is expecting to measure the success of this DMM based on the metrics listed above. If the campaign is not proving effective based on these metrics, then RWA will update or revise the campaign, or if necessary begin a new campaign, to garner more customer participation.

There is no current method in the industry to evaluate water savings for this program. The popularity of public programs can be measured through the acceptance of brochures and attendance at various water conservation related events, etc.

## **2.2 School Education Programs**

The City of Folsom participates in a regional school education program in partnership with Regional Water Authority and its 19 member agencies. The program consists of special

assemblies and classroom materials provided by the Sacramento Bee's News In Education program. The program reaches approximately 3,000 students every year.

The City of Folsom fully participates in the RWEP School Education Program. The RWEP program has focused mainly on K-8 programs. RWEP has continued to use the legacy Sacramento Bee Newspapers in Education (NIE), now called Media in Education (MIE) program that originated back in the mid-1990s as part of the Sacramento Area Water Works Association (SAWWA) program in order to meet the baseline requirements for school education outreach. It includes an annual Water Conservation Pledge and Quiz Contest. It is estimated that a total of 33,932 students have been educated since inception.

Historically between 2004 and 2008, RWEP also sponsored the Great Water Mystery School Assembly program that was co-funded with the Sacramento Stormwater Quality Partnership. Over the years, a total of 60,208 students in Grades 3-6 were educated about benefits of better water management practices at home to save water resources and reduced polluted stormwater runoff.

In FY 2011, RWEP embarked on a new program, in partnership with the Bureau of Reclamations' American River Water Education Center, and the Water Education Foundation to include sponsorship of Project WET school teacher workshops. A total of 25 teachers attended the first workshop in April 2011.

The RWEP is in the process of evaluating whether a more effective school program that will reach more students is warranted. Working with the RWEP members and local educators, RWA plans to: (1) evaluate the existing program; (2) evaluate the success of other programs in the region and around the state; (3) develop objectives and a target audience (e.g., grade level); (4) materials; and (5) an implementation strategy for the school education program into the future.

The current marketing strategy for the SacBee MIE program is both email to teachers that have participated in the past and direct mail campaign to local schools for the whole series of topics throughout the year. Each teacher decides on which week's topics to participate in that cover a wide range of education topics including RWEP's sponsored week of "Be Water Smart News, Water the Never Ending Story."

The Project WET workshops are marketed to teachers and environmental educators by the local California Regional Environmental Education Community (CREEC) Network representatives, to water educators through Project WET newsletters, and by RWA through direct mail and contacts with local school administrations and teachers.

RWA continues to track by a variety of means participation in the regional school education program. For the SacBee MIE Program, the metrics tracked annually include:

- ◆ Number of teacher guides downloaded
- ◆ Number of schools
- ◆ Number of classrooms

- ◆ Number of students reached
- ◆ Number of students participating in the pledge (Grades K-3) or contest (Grades 4-8) entries received by the SacBee
- ◆ Comments back from teachers

For the Project WET teacher training program, the following metrics are also tracked annually:

- ◆ Number of teachers attending workshops
- ◆ Which school districts
- ◆ Number of schools
- ◆ Estimated number of students reached
- ◆ Teacher workshop evaluations

RWEP plans to continue with regional school education program activities along with distribution of school-age educational materials and Project WET Workshops. The school schedule dictates when participation in the RWEP school education program occurs and follows the months that schools are in session from August to the following May. The annual budgeted direct expenses for the regional school education program have been \$20,000 and will continue at this level for the foreseeable future.

Based on the annual results of the participation levels tracked, RWA is expecting to measure the success of this BMP based on the metrics listed above. As described above, RWA is currently conducting an evaluation process of the existing regional school education program, which includes interviews of local school teachers at a variety of grade levels. The program will continue as currently planned until the evaluation process is complete and the program's content and/or implementation strategy may be revised in the future

It is unknown what changes in water using behavior may arise from student and educators participation in the regional school education programs. Considering the difficulty of placing a numerical value for water savings, an intangible method of effectiveness and resulting water savings, can be determined by the amount of voluntary classroom and school participation with available K-12 water conservation programs.

### 3. *Residential*

#### **3.1 Residential assistance program and landscape water surveys**

The City of Folsom began implementing this program on August 1, 2000 and, because it is successful, anticipates continuing the program indefinitely. These programs generally involve sending a qualified water auditor to customer locations to audit water use, including a survey of both indoor and outdoor components. The indoor component checks for leaks in toilets, faucets, and meters, and checks showerhead, toilet, and aerator flow rates, offering

replacements for high-flow devices. The outdoor survey includes checks of the irrigation system and control timers, and a review of, or development of, a customer's landscape irrigation schedule. The City of Folsom's water survey program currently includes:

- ◆ Marketing of the program through:
  - City website
  - City newsletter
  - Local print media (Folsom Telegraph weekly newspaper)
  - Contact at public events
  - Follow up from water waste complaints
  - Cold calls to resident managers (multifamily only)
- ◆ Survey details:
  - Discuss interior fixture conservation measures
  - Explain ultra low flow toilet replacement and rebate program
  - Check irrigation timer
  - Run all zones of the sprinkler system
  - Note damage to the irrigation system and discuss necessary repairs
  - Note inefficient irrigation elements and discuss improvements
  - Review timer programming with homeowner/manager
  - Develop irrigation schedule
  - Deliver conservation packet
- ◆ Conservation packet includes:
  - Literature
    - "Sometimes less is more...water wisely!" (RWA)
    - "Water Management Program" (City of Folsom)
    - "ULFT rebate program" (RWA and SRCSD)
    - "There's a better way to water!" (City of Folsom)
    - "Smart Water and Energy Use in the West" (Sunset Magazine)
    - "How to Water Your Garden" (Sunset Magazine)
    - "Water Efficient Landscapes" (DWR, Office of Water Use Efficiency)
    - "Water Efficient Landscaping" (UC Extension, Master Gardeners)
    - "Landscape Design II" (Water Education Foundation)
  - Devices
    - Toilet tank tummy.
    - Toilet tank leak dye
    - Low flow shower head
    - Low flow kitchen sink aerator
    - Low flow bathroom sink aerator
    - Garden hose nozzle

**Table 4-3. Historic residential plumbing retrofits.**

Historic Plumbing Retrofit Activities					
	2006	2007	2008	2009	2010
Single family devices	1736	1701	1924	1844	942
Multi-family devices	152	432	260	312	200
Actual expenditures - \$	\$9,855	\$11,134	\$11,400	\$11,254	\$5,961

### **3.2 High-efficiency clothes washing machine financial incentive program**

The City of Folsom has implemented this program from 2006 through 2010. The City of Folsom's program was a joint effort with the RWA and SMUD to administer the rebates. The program was a cooperative effort between the membership of RWA and energy providers. Only Tier 2 and Tier 3 washing machines listed by the Consortium for Energy Efficiency qualify for a rebate. The annual expected water savings is 4 acre-feet. The City of Folsom's high-efficiency washing machine rebate programs will include the following:

- ◆ Marketing of the program through:
  - City website
  - City newsletter
  - Contact at public events
  - Follow up from water waste complaints
  - Cold calls to resident managers (multifamily only)
  - Cold calls to Laundromats.
  - Cold calls to hotel managers.

The program was eliminated in December of 2010 as the City shifted its resources to the CUWCC GPCD water savings method. During the program the City issued 810 rebates of \$50.00 per unit for a total of \$40,500.

### **3.3 WaterSense Specification Toilets**

The City of Folsom began implementing this program in 2003 and, because it is successful, anticipates continuing the program indefinitely. This program generally involves sending a qualified water conservation staff person to customer locations to insure that the toilet being replaced is a pre-1994 high water use model. The customer is responsible to purchase and install their own toilets. After the toilet is installed the customer completes an application and sends it in with the original receipts or invoices for processing. The rebate amount is a maximum of \$125.00 per toilet. The program is a cooperative effort with the City of Folsom, the Sacramento Regional County Sanitation District (SRCSD), and the RWA. SRCSD contributes \$75.00 of the \$125.00 rebate per toilet. The City anticipates reaching a saturation rate at some point in the future, at which time it will be inefficient to continue the program.

The City of Folsom's High Efficiency Toilet (HET) replacement program currently includes the following:

- ◆ Marketing of the program through:
  - City website
  - City newsletter
  - Contact at public events
  - Follow up from water waste complaints
  - Cold calls to resident managers (multifamily only)



**Table 4-4. Historic ultra-low-flush toilet replacements.**

Historic Ultra Low Flush Toilet Replacements					
	Single-Family				
	2006	2007	2008	2009	2010
ULF rebates	26	71	248	511	300
Actual expenditures - \$	\$3,250	\$8,875	\$32,250	\$72,225	\$52,500
Actual water savings - AFY	23	42	53	53	53

#### 4. Commercial, Industrial and Institutional

The City of Folsom began implementing this program in 2005, and, because of the success of other water districts and energy companies, will continue the program indefinitely. The City of Folsom is performing water surveys through a cooperative program with the RWA and CUWCC. This program involves a site visit by the City of Folsom's Water Conservation Division, who performs a water survey and provides recommendations for the replacement of the existing pre-rinse hand valves in kitchen facilities with an efficient low-flow model. The City is also coordinating with RWA to implement a rebate program for tank toilets, and is evaluating the opportunity to extend to flush valve systems. The City of Folsom's CII program includes the following:

- ◆ Marketing of the program through:
  - City website
  - City newsletter
  - Contact at public events
  - Follow up from water waste complaints
  - Cold calls by the contractor
- ◆ CII water surveys include:
  - Site visit by the contractor
  - Evaluation of water use
  - Recommendations to improve water efficiency
  - Explanation of rebate programs
  - Replace pre-rinse hand valve with a low flow model

The annual expected water savings is 74 acre-feet. See **Table 4-5** for completed surveys and projected surveys for commercial, industrial, and institutional accounts.

**Table 4-5. Historic CII Conservation Surveys**

Historic CII Conservation Program					
	2006	2007	2008	2009	2010
Surveys completed	26	22	28	20	5
Incentives provided?	YES	YES	YES	YES	YES
Follow-up visits	0	0	0	0	0
Actual expenditures - \$	\$3,016	\$2,552	\$3,248	\$2,320	\$580

## 5. Landscape

The City of Folsom began implementing large landscape conservation programs and incentives in 1998 and because it is successful, anticipates continuing the program indefinitely. These programs generally involve sending a qualified water auditor to large landscape customer locations to audit water use and inspect irrigation components. Incentives are offered through a DWR Proposition 50 grant program administered by the Regional Water Authority (RWA)<sup>28</sup>. The annual expected water savings is 39 acre-feet.

The City of Folsom's large landscape conservation program currently includes the following:

- ◆ Marketing of the program through:
  - City website
  - City newsletter
  - Contact at public events
  - Communication with other city departments responsible for large landscape sites; Parks and Recreation, Lighting and Landscape Districts, and Public Works
  - Communication with homeowner associations and property management companies
- ◆ Water audits include
  - Irrigation system inspection
  - Can test to determine distribution uniformity
  - Measure landscaped area
  - Establishing a water budget according to IA guidelines
  - Review or develop an irrigation schedule
  - Document damage and necessary repairs
  - Present upgrade opportunities for water efficiency
  - Determine eligibility for grants and incentives

### GPCD Compliance

The City has elected to use the CUWCC's gallons per capita per day (GPCD) reporting method for 2009, 2010, and future years. Through the GPCD reporting method, the City will primarily focus on residential and large landscape irrigation efficiency, as this provides the greatest opportunity for savings. The Water Conservation Division will complete water-wise residential house calls, large landscape irrigation audits, landscape and irrigation rebates, and outreach programs focusing on water conservation through landscaping modifications. The City has also invested in a 2-Year Water Management Control Program that will be completed in 2012 and the installation of water meters on homes that did not have water meters. **Table 4-6** below includes the baseline GPCD calculated values for the Calendar Years 1997-2006.

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<sup>28</sup> The Regional Water Authority (RWA) is a joint powers authority formed in 2001 to promote collaboration on water management and water supply reliability programs in the greater Sacramento, Placer, and El Dorado County region.

**Table 4-6. GPCD calculations.**

Year	Service Area Population <sup>29</sup>	Gross Water (acre-feet)	GPCD
1997	33,764	14,903	394
1998	35,290	14,676	371
1999	40,160	17,496	389
2000	45,021	17,578	349
2001	47,540	22,654	425
2002	50,760	22,010	387
2003	52,566	21,986	373
2004	54,046	24,233	400
2005	55,547	23,235	373
2006	56,779	25,621	403
Base daily per capita water use <sup>30</sup>			386

The City of Folsom baseline target (based on ten consecutive years from 1997-2006) is 386 GPCD. The City's 2018 target based on the California Urban Water Council Conservation method is calculated as 82% of 386 GPCD (386 X 0.82), or an 18% reduction from 386 GPCD. This equates to 317 GPCD. Below is **Table 4-7** showing the biennial targets.

**Table 4-7. GPCD Biennial targets.**

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	373	100%	386
2012	2	92.8%	359	96.4%	373
2014	3	89.2%	345	92.8%	359
2016	4	85.6%	331	89.2%	345
2018	5	82.0%	317	82.0%	317

## B. Provide a 3-year Budget for BMPs

The table below shows the foundational and programmatic BMPs with expenditures for 2009, 2010, and 2011.

**Table 4-8. Foundational and Programmatic BMPs.**

Foundational Best Management Practices				
Category	BMP Name	2009	2010	2011
Operations Practices	Conservation Coordinator	\$267,000	\$267,000	\$267,000
Operations Practices	Water Waste Prevention			

<sup>29</sup> The Service Area Population is the population of the City within its service area boundary. One area, the American River Canyon, is within the City's boundary, but not served potable water by the City. This area is not included in the population figure.

<sup>30</sup> Base daily per capita water use is calculated by adding the values in the column and dividing by the number of rows.

Operations Practices	Water Loss Control <sup>31</sup>	\$100,000	\$100,000	\$550,000
Operations Practices	Metering with Commodity Rates for All New Connections and Retrofit of Existing Meters <sup>32</sup>	\$4,750,000	\$2,460,000	\$141,000
Operations Practices	Retail Conservation Pricing <sup>33</sup>	\$0	\$0	\$0
Education Programs	Public Information Programs	\$52,000	\$52,000	\$52,000
Education Programs	School Education Programs	\$5,000	\$5,000	\$5,000
<b>Programmatic Best Management Practices<sup>34</sup></b>				
<b>Category</b>	<b>BMP Name</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Residential	Residential assistance program	\$213,000	\$213,000	\$213,000
Residential	Landscape water survey			
Residential	High-Efficiency Clothes Washing Machine Financial Incentive Programs			
Residential	WaterSense Specification (WSS) toilets			
CII	Commercial, Industrial, and Institutional			
Landscape	Landscape			

<sup>31</sup> In January 2011, the City began a 2-Year Water Management Control Program that will be completed at the end of Calendar Year 2012. Additional expenditures for 2012 (approximately \$200,000) are not included in this table.

<sup>32</sup> In 2010, the City completed its Meter Installation Project, which consisted of installing approximately 5,400 residential water meters on homes that did not have a water meter. The City's Fixed Network system should be completed by the end of 2011.

<sup>33</sup> Currently, the City of Folsom does not have conservation based water rates. The City may consider adopting drought rates.

<sup>34</sup> These amounts are budgeted for all of the programmatic BMP's for the Residential, CII, and Landscape categories identified in the table.

## Section 5: Plan Implementation

Pursuant to water service and settlement contract terms, contractors must report on Plan implementation annually.

Agricultural contractors can complete an annual update by filling in the information for BMPs on the [Agricultural](#) Water Management Council website at [www.agwatercouncil.org](http://www.agwatercouncil.org).

Urban Contractors can complete an annual update by filling in the information for urban BMPs on the CUWCC website. Contractors who are signatories of the CUWCC are currently submitting annual reports via the CUWCC's *BMP Reporting Database* located on their web site at [www.cuwcc.org](http://www.cuwcc.org). Through an agreement with the CUWCC, Reclamation's urban non-signatories may now submit their annual reports through the CUWCC's web site using the "BMP Reporting" Link. Contractors will have to contact the CUWCC at 916-552-5885 to obtain an initial password to login. Urban BMPs are reviewed based on the CUWCC's MOU (adopted December 2008).



## **Section 6: Exemption Process**

City of Folsom is not claiming any BMP exemptions.





## **Section 7: Regional Criteria**

There are no Regional Criteria at this time. If in the future regional criteria are considered, they will be developed as a separate document.



## **Section 8: Five-Year Plan Revision Procedure**




No data required

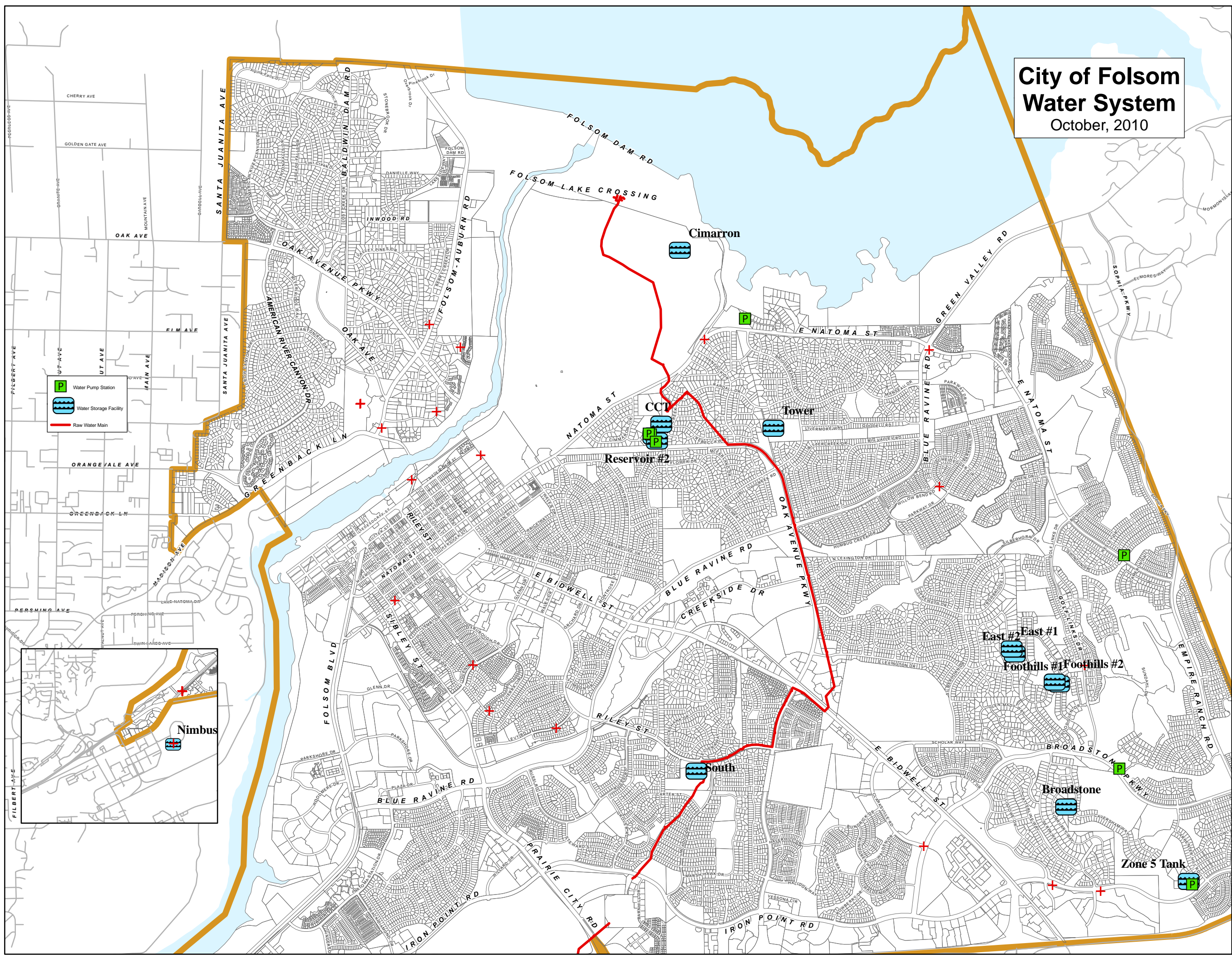
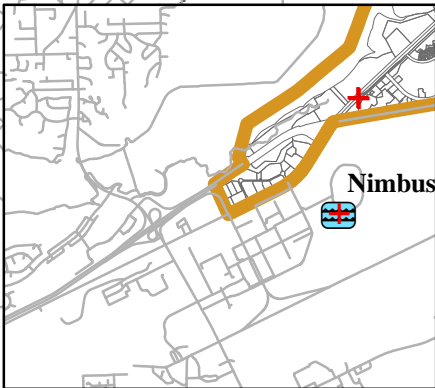
**ATTACHMENT A**

**District Facilities Map**



**City of Folsom  
Water System**  
October, 2010

-  Water Pump Station
-  Water Storage Facility
-  Raw Water Main





## **ATTACHMENT B**

### **District Rules and Regulations**

**Chapter 13.26**  
**WATER CONSERVATION**

Sections:

- [13.26.005](#)Definitions.
- [13.26.010](#)Application.
- [13.26.020](#)City responsibility.
- [13.26.030](#)Water conservation program and landscape guidelines.
- [13.26.040](#)Base allocation of water.
- [13.26.050](#)Wasteful use of water.
- [13.26.060](#)Determination of water conservation stages.
- [13.26.070](#)Water conservation stages.
- [13.26.080](#)Water use restrictions.
- [13.26.090](#)Construction water.
- [13.26.100](#)Sustainable landscaping.
- [13.26.110](#)Irrigation system inspections.
- [13.26.120](#)Discontinuance of water service.
- [13.26.130](#)Unauthorized water use.
- [13.26.140](#)Cross-connection control devices.
- [13.26.150](#)Violation declared a nuisance.
- [13.26.160](#)Enforcement.
- [13.26.170](#)Penalties.
- [13.26.180](#)Remedies cumulative.
- [13.26.190](#)Variances.
- [13.26.200](#)Fire and other emergencies.

**13.26.005Definitions.**

- A."Base allocation" means the amount of water allocated to each customer class for both interior and exterior use on a monthly or billing cycle basis.
- B."Best management practice (BMP)" means a policy, program, practice, rule, regulation ordinance or the use of devices, equipment or facilities that result in more efficient use or conservation of water.
- C."Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by a professional trade organization or other educational organization.
- D."CDPH" means the California Department of Public Health.
- E."City" means the city of Folsom.
- F."City manager" means the city manager of the city of Folsom or his or her designee unless otherwise stated or indicated by context.
- G."City water system" means those facilities within and without the city of Folsom that the city uses to deliver water as the water purveyor recognized by the California Department of Public Health.
- H."Customer" means any person or entity using water supplied by the city water system. "Customer" includes tenants of single-family dwellings or duplexes, owners of real property and management companies responsible for property management of real property.
- I."CUWCC" means the California Urban Water Conservation Council.
- J."Department" means the city of Folsom utilities department.
- K."Director" means the city of Folsom director of utilities or his or her designee unless otherwise stated or indicated by context.
- L."Discontinued service" means having the water service turned off by the department.
- M."Fire chief" means the fire chief of the city of Folsom or designee unless otherwise stated or indicated by context.
- N."Irrigation service" means a water service that is exclusively for landscape irrigation purposes.
- O."Nonresidential customer" means a customer of the city water system on whose property a residence is not situated.
- P."Person" means any person, business, firm, partnership, association, corporation, company or organization of any kind.
- Q."Private fire service" means a private fire service main and appurtenances installed in accordance with NFPA 24 on private

property and maintained by the property owner for the explicit intent of providing fire flows either through fire hydrants, fire sprinkler systems, or other water-based fire protection systems.

R."Residential customer" means a customer of the city water system on whose property, whether owned or rented, at least one person resides.

S."Sustainable landscaping practice" means the use of best management practices in the planning and maintenance of water efficient landscaping, as discussed in Section [13.26.100](#), Sustainable landscaping.

T."Water conservation" means the best management practices for the reasonable and efficient use of water for both indoor and outdoor water demands.

U."Water conservation program guidelines" means the program guidelines developed, maintained, and managed by the director pursuant to this chapter.

V."Water management coordinator" means the water management coordinator in the utilities department.

W."Wasteful use of water" is as defined in Section [13.26.050](#). (Ord. 1118 § 2 (part), 2009)

#### **13.26.010Application.**

The provisions of this chapter shall apply to all customers of the city water system. (Ord. 1118 § 2 (part), 2009)

#### **13.26.020City responsibility.**

The city, and its duly authorized agents, servants and employees, shall have the exclusive right to deliver water within the city's water service area. The city shall also have the right to manage water demand within the city's water service area. (Ord. 1118 § 2 (part), 2009)

#### **13.26.030Water conservation program and landscape guidelines.**

A.The director is authorized to develop sustainable landscape practices consistent with the water conservation intent of this chapter, CUWCC best management practices and any applicable laws. The sustainable landscape practices shall be included as a condition of approval for any development project with new or rehabilitated landscaping for which the city has discretionary approval authority where such landscape area is greater than two thousand five hundred square feet or as otherwise determined by the director to achieve the city's water conservation goals.

B.The director shall oversee this chapter's implementation, compliance with the CUWCC best management practices and any laws mandating water conservation. The director shall, from time to time, but at least annually, review the sustainable landscape practices and determine if such practices are reasonable and achieve the level of conservation required under this chapter for the declared water conservation stage, taking into account the burden imposed on property owners. (Ord. 1118 § 2 (part), 2009)

#### **13.26.040Base allocation of water.**

The director may develop a base allocation for each class of customer account taking into account the needs and characteristics of each customer class. This base allocation may be used to evaluate compliance with the conservation stage in effect and to encourage the reasonable and efficient use of water. (Ord. 1118 § 2 (part), 2009)

#### **13.26.050Wasteful use of water.**

Any of the following acts or omissions, whether intentional, unintentional, willful or negligent, shall constitute the wasteful use of water:

A.Water flowing away from a property caused by excessive application(s) of water beyond reasonable or practical irrigation rates, duration of application, or other than incidental applications to impervious surfaces.

B.Causing or permitting an amount of water to discharge, flow, run to waste into or flood any gutter, sanitary sewer, water course or storm drain, or to any adjacent lot, from any tap, hose, faucet, pipe, sprinkler, or nozzle. In the case of irrigation, "discharge," "flow" or "run to waste" means that water is applied to the point that the earth intended to be irrigated has been saturated with water so that additional applied water then flows over the earth. In the case of washing, "discharge," "flow" or "run to waste" means that water in excess of that necessary is applied to wash, wet or clean the dirty or dusty object, such as an automobile, sidewalk, or parking area.

C.Allowing water fixtures or heating or cooling devices to leak or discharge water.

D.Maintaining ponds, waterways, decorative basins or swimming pools without water recirculation devices or with known leaks, both seen and unseen.

E.Discharging water from, and refilling, swimming pools, decorative basins or ponds in excess of the frequency reasonably necessary to maintain the health, maintenance or structural considerations of the pool, basin or pond, as determined by the



director.

F.Continued operation of an irrigation system that applies water to an impervious surface or that is in disrepair.

G.Use of a water hose not equipped with a control nozzle capable of completely shutting off the flow of water except when positive pressure is applied.

H.Irrigation of lawns or landscaping when it is raining.

I.Overfilling of any pond, pool or fountain which results in water discharging from the pond, pool or fountain.

J.Failure to repair customer pipes, faulty sprinklers or other water-related fixtures that leak water within five working days, unless the director informs the customer that the leak must be repaired more quickly, in which case the customer shall repair the leak in the time specified by the director.

K.Irrigating lawns or landscaping between the hours of 10:00 a.m. and 10:00 p.m., with the exception of drip irrigation as otherwise authorized pursuant to this chapter, unless a variance is granted by the director.

L.Using potable water from the city water system for compaction, dust control or other construction purposes without first obtaining approval from the director as provided in Section [13.26.090](#) and a meter from the city.

M.Installing a single-pass cooling system, such as water cooled air compressor, in any property that is newly connected to the city water system. This does not apply to evaporative cooling systems.

N.Installing a nonrecirculating system in any new automatic car wash or new commercial laundry system or failure to utilize current best management practices for water conservation that are industry standards. (Ord. 1118 § 2 (part), 2009)

### **13.26.060Determination of water conservation stages.**

In determining the city water system's water conservation stage, the city manager shall determine whether that system's water supplies available for potable use are sufficient to meet the current customer demands on that system and shall consider, unless otherwise excluded by this section, all relevant factors. The city manager shall consider, among other things: (A) any variations in the reliability of the water supplies available to the city water system; (B) any declarations by the Bureau of Reclamation concerning its ability to deliver water under Central Valley Project water-service contracts; (C) availability of nonpotable water to meet nonpotable demands on the city water system; (D) the success, or lack thereof, of previous declarations of a less stringent water conservation stage in causing the water-use reductions sought by the city; and (E) any agreements between the city and local water purveyors for deliveries of additional water supplies to the city. The city manager will select the necessary stage for conservation under Section [13.26.070](#). (Ord. 1118 § 2 (part), 2009)

### **13.26.070Water conservation stages.**

The city manager is authorized to implement and enforce whatever conservation measures are deemed necessary to achieve the water reduction requirements of the declared conservation stage. For each stage, the water use reduction for customers shall be as follows:

A.Stage one (basic stage) shall be in effect at all times unless the city manager determines that a more restrictive conservation stage is appropriate. Base allocation of water may be used to determine allowable water use for each customer in this stage and compliance with the following conservation stages.

B.Stage two (water alert) shall achieve a reduction of up to twelve percent relative to the base allocation of water.

C.Stage three (water warning) shall achieve a reduction of up to twenty percent relative to the base allocation of water.

D.Stage four (water crisis) shall achieve a reduction of up to thirty-five percent relative to the base allocation of water.

E.Stage five (water emergency) shall achieve a reduction of up to fifty percent relative to the base allocation of water, or any other reduction the city manager determines, in writing, is necessary to protect public health and safety in the city during the actual situation presented by a stage five water emergency. (Ord. 1118 § 2 (part), 2009)

### **13.26.080Water use restrictions.**

Water use restrictions during the various conservation stages shall, at a minimum, be as listed below and may be augmented by other restrictions as determined necessary by the city manager.

A.During the stage one (basic stage) conservation stage, the following restrictions shall be enforced:

1.Water will be used for beneficial uses; all wasteful use of water is prohibited.

2.Water shall be confined to the customer's property and shall not be allowed to run off to adjoining property or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.

3.Free flowing hoses are prohibited for all uses including landscape watering, vehicle and equipment washing, ponds, evaporative coolers and livestock watering troughs. Automatic shut-off devices shall be installed on any hose or filling apparatus in use.

4.All pools, spas and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak proof. Pool draining and refilling shall be allowed only to the extent required for health, maintenance, or structural considerations, and must otherwise comply with all applicable federal, state and local stormwater management requirements, including but not limited to Chapter [8.70](#), Stormwater Management and Discharge Control.

B.During the stage two (water alert) conservation stage, the following restrictions shall be enforced:

1.All stage one (basic stage) restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2.Landscape and pasture irrigation shall be limited to a maximum of three days per week based on the following odd-even schedule, with the exception of drip irrigation, which may be conducted on any day.

a.Customers with street addresses that end with an odd number may irrigate only on Tuesdays, Thursdays and Saturdays.

b.Customers with street addresses that end with an even number may irrigate only on Wednesdays, Fridays and Sundays.

c.No irrigation is permitted on Mondays.

3.Hand and manual watering follows the same odd/even day schedule and may be done anytime during the day.

4.Washing of streets, parking lots, driveways, sidewalks, buildings or other hardscape surfaces is prohibited, except as necessary for health, sanitation or fire protection purposes.

5.Restaurants shall serve water only upon specific request.

6.Public and private streetscape landscaping (medians and frontage) may be watered only on the same schedule as customers with street addresses that end with an even number.

C.During the stage three (water warning) conservation stage, the following restrictions shall be enforced:

1.All stage two restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2.Landscape and pasture irrigation shall be limited to a maximum of two days per week based on the following odd-even schedule, with the exception of drip irrigation, which may be conducted on any day.

a.Customers with street addresses that end with an odd number may irrigate only on Tuesdays and Saturdays.

b.Customers with street addresses that end with an even number may irrigate only on Wednesdays and Sundays.

c.No irrigation is permitted on Mondays, Thursdays and Fridays.

d.Irrigation for public parks and other public grounds, including landscaping and lighting district property, shall only be allowed with an irrigation plan and irrigation system audit that has been approved by the director in accordance with Section [13.26.110](#), irrespective of size.

3.No water from the city water system shall be used for construction purposes such as dust control, compaction, or trench jetting, unless the use is approved by the director consistent with the provisions of Section [13.26.090](#).

D.During the stage four (water crisis) conservation stage, the following restrictions shall be enforced:

1.All stage three restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2.Landscape and pasture irrigation, including drip irrigation, shall be limited to a maximum of one day per week based on the following odd-even schedule.

a.Customers with street addresses that end with an odd number may irrigate only on Tuesdays.

b.Customers with street addresses that end with an even number may irrigate only on Wednesdays.

c.No irrigation is permitted on Mondays, Thursdays, Fridays, Saturdays and Sundays.

3.Public and private streetscape landscaping (medians and frontage) may be watered only on the same schedule as customers with street addresses that end with an even number.

4.No water from the city water system shall be used to drain and refill swimming pools, artificial lakes, ponds or streams and no new permits for swimming pools, artificial lakes, ponds or streams shall be issued until the water conservation stage has been declared to be stage one.

5.Water use for ornamental ponds and fountains is prohibited unless required to maintain existing vegetation or to sustain existing fish/animal life.

6.New or expanded landscaping on properties is limited to drought-tolerant trees, shrubs, and ground cover and no new turf or grass shall be planted, hydro-seeded or laid.

7.Washing of automobiles or equipment shall be done on the lawn or at a commercial establishment that uses recycled

or reclaimed water.

8.All water leaks shall be repaired within twenty-four hours of notification by the utilities department or service may be discontinued.

E.During the stage five (water emergency) conservation stage, the following restrictions shall be enforced:

1.All stage four restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2.No landscape and/or pasture irrigation shall be allowed.

3.Flushing of sewers or fire hydrants is prohibited, except in case of an emergency and for essential operations.

4.Flushing of fire protection systems is prohibited, except during required maintenance or servicing of the system.

5.Water use for ornamental ponds and fountains is prohibited.

6.Washing of automobiles or equipment shall be done at a commercial establishment that uses recycled or reclaimed water.

7.Installation of any new lawns or landscaping is prohibited.

8.No water from the city water system shall be used for construction purposes such as dust control, compaction, or trench jetting, unless the use is necessary for fire protection system testing, maintenance, or acceptance by the fire chief. (Ord. 1118 § 2 (part), 2009)

### **13.26.090Construction water.**

Water for construction purposes obtained from the city's water supply may only be used in the city's water service area. Water for dust control, compaction and other construction activities shall be subject to the following conditions:

A.Use of water from the city water system for construction purposes shall require a city-issued construction water meter and a refundable security deposit that includes a monthly meter rental fee as established by the department. Prior to such water use, the construction water customer must obtain approval from the director to use the water for construction and agree to comply with all of the requirements of this chapter. The director may impose such additional conditions on the use of such water, including, but limited to, conditions regulating the purpose for the use of the water, rate of use, location, frequency and quantity of use, and such other conditions as deemed reasonably necessary by the director to effectuate the purposes of this chapter. The construction meter shall be located by the department and shall only be relocated or removed by the department. Unauthorized relocation or removal of a construction meter shall be deemed theft and the offender shall be subject to the penalties set forth in Section [13.26.170](#).

B.Construction water shall only be drawn through a construction water meter. Construction water drawn through an unmetered connection shall be deemed theft of water and shall be grounds for the deposit on the construction meter to be forfeited. The offender shall also be subject to the penalties specified in Section [13.26.170](#). In the event the person identified as drawing water without a metered connection does not have a meter, the action shall be deemed theft and the offender shall be subject to the penalties specified in Section [13.26.170](#).

C.These requirements for construction water use may be modified or supplemented by other conservation measures as determined appropriate by the director for the declared conservation stage. The director may terminate the approval granted to use the construction water based on water use restriction stages, violation of the terms and conditions of use, and/or for conduct that amounts to wasteful use of water. (Ord. 1118 § 2 (part), 2009)

### **13.26.100Sustainable landscaping.**

Where this chapter permits or prohibits acts based upon whether or not a planting, tree, shrub, or groundcover is "drought-tolerant" or "sustainable" the determination shall be made based upon: (A) Sunset's The Western Garden Book (February 2007), Sunset Books Publishing; (B) Robert Perry, Trees and Shrubs for Dry California Landscapes; (C) EBMUD, Water Wise Gardening; (D) UC Davis Arboretum's All Stars plant database ([www.arboretum.ucdavis.edu](http://www.arboretum.ucdavis.edu)) or as determined by the director. (Ord. 1118 § 2 (part), 2009)

### **13.26.110Irrigation system inspections.**

All customers, public and private, with a parcel over five acres and with a separate irrigation service shall conduct an annual irrigation system inspection prior to the start of the irrigation season on April 1st. This inspection shall be performed by certified landscape irrigation auditor or licensed landscape or irrigation contractor and the results forwarded to the department in accordance with the procedure outlined in the water conservation program guidelines. This requirement will be waived for one full year if a full landscape water audit has been performed in the previous year by the department's water management staff, who are available on a limited basis. Single-family residences are exempt unless the director determines there has been wasteful use of water on a customer's premises and the conditions have not been corrected within five days after the city

provides written notification to discontinue such practice.

Customers that have a current irrigation system check-up on file with the department will be allowed one courtesy water waste warning before being deemed in violation of this chapter. (Ord. 1118 § 2 (part), 2009)

### **13.26.120 Discontinuance of water service.**

The director may discontinue service to a customer's connection to the city water system at the time that the director issues to the customer: (A) a notice of a third violation of this chapter during the stage one (basic stage), or stage two (water alert) within two months; (B) a notice of a second violation of this chapter during a stage three (water warning) or a stage four (water crisis) within one month; or (C) a notice of a second violation during a stage five (water emergency), irrespective of time. If the customer's water service is discontinued due to violations of this chapter, the customer shall be subject to the penalties specified in Section [13.26.170](#). Upon seeking renewed service from the city, the customer shall pay the city's water turn off/on service fee as set by ordinance or resolution of the city council. (Ord. 1118 § 2 (part), 2009)

### **13.26.130 Unauthorized water use.**

A. An illegal connection to the city water system shall either be metered by the property owner within the time specified by the department or disconnected at the discretion and direction of the director, and the offender shall be subject to the penalties specified in Section [13.26.170](#).

B. Unauthorized use of a fire hydrant, public or private, for anything other than fire flows or permitted and metered construction water shall subject the offender to the penalties specified in Section [13.26.170](#) and Chapter [8.36](#), Folsom Fire Code.

C. Private fire services with an observed demand that is deemed not to be fire flow by the department shall have a meter and appropriate cross-connection control device installed by the property owner, upon approval by the director and the fire chief. Prior to making any modifications or alteration to the on-site fire service, a permit shall be obtained from the fire department in accordance with Chapter [8.36](#). Upon written notification of the requirement to install a meter and cross-connection control device, the property owner shall have thirty calendar days to submit a plan of correction to the director. Failure to comply with this section shall subject the property owner to the penalties specified in Section [13.26.170](#), Penalties, and the service may be disconnected at the discretion of the director and the fire chief. (Ord. 1118 § 2 (part), 2009)

### **13.26.140 Cross-connection control devices.**

All connections to the city's water system shall have the appropriate cross-connection control device as required by CDPH regulations and enforced by the department in accordance with Chapter [13.22](#), Water System Cross-Connection Control. These devices shall be from the approved and published list maintained by the University of Southern California (USC) or other list as approved by the director and shall be tested annually in accordance with the department's policies and procedures. Devices used on private fire services shall be listed for fire service use and maintained in accordance with State Fire Marshall regulations. (Ord. 1118 § 2 (part), 2009)

### **13.26.150 Violation declared a nuisance.**

Any activity in violation of this chapter will adversely and seriously affect the public health, safety and welfare, is hereby declared to be a public nuisance and may be remedied as provided in this chapter, any other applicable portion of the Folsom Municipal Code or applicable state law. (Ord. 1118 § 2 (part), 2009)

### **13.26.160 Enforcement.**

A. This chapter shall be enforced pursuant to the provisions of Chapter [1.08](#) to [1.10](#), inclusive, of Title 1 of the Folsom Municipal Code and any other enforcement mechanism available to the city under the Folsom Municipal Code and/or applicable law.

B. Unless otherwise expressly provided in this chapter, the director shall enforce the provisions of this chapter. (Ord. 1118 § 2 (part), 2009)

### **13.26.170 Penalties.**

A. The goal of the provisions of this chapter are to achieve voluntary compliance from the customer, and the city will take reasonable measures to assure the customer has information available to promptly and efficiently address water use issues. Where voluntary compliance cannot be achieved through initial contacts and warnings, then appropriate administrative penalties and further action are required. Except as otherwise provided herein, violations of any provision of this chapter shall be addressed as follows:

Violation	Penalty
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First	Personal or written notification of the violation.
Second (Within three months of first violation)	Written notification and issuance of a notice to correct.
Third (Within six months of first violation)	Issuance of an administrative penalty, mandatory installation of a water meter, discontinued water service and/or other penalties as provided in the notice of violation and as determined by the utilities director.

#### B. Penalties.

1. A violation of this chapter shall also be an administrative violation as defined in Section [1.08.020](#).
2. Each of the sanctions for administrative violations identified in Section [1.09.013](#) shall be available for enforcement of the provisions of this chapter. Based on the criteria for imposition of administrative sanctions set forth in Section [1.09.014](#), each day a violation of this chapter continues it shall be deemed a Level A violation as that term is described in Section [1.09.012](#) with an initial penalty of up to one hundred dollars.
3. In addition to any other penalties provided by this chapter, if a customer of the city water system violates any of the water use restrictions during a stage two, three, four, or five water conservation stage as set forth in Section [13.26.080](#), and such conditions are not corrected within five days after the customer is given written notice, the city is authorized to do any or all of the following:
  - a. Meter any flat rate service connection and apply the regularly established metered rates. If the parcel has over two thousand five hundred square feet of landscaping a separate landscape meter may be installed. Costs for the water meters and installation shall be paid by the property owner.
  - b. If the service is metered, the customer shall be billed at twice the metered rate during the time that the violation continues. If more than two thousand five hundred square feet are irrigated and the parcel does not have a separate irrigation meter, then an irrigation meter may be installed. The customer shall be billed at twice the metered rate during the time the violation continues. Costs for the water meter, and for any required cross-connection controls and installation, shall be paid by the property owner.

C. Appeal. There shall be no appeal of the water use restriction identified in Section [13.26.080](#) and any appeal of administrative penalties shall follow the request for hearing procedures provided in Chapter [1.09](#). Any order to install a mandatory water meter, discontinue water service or any other orders or decisions of the director shall be appealable to the city manager pursuant to Section [2.08.060](#); provided, however, that the city manager's decision shall be final and there shall be no right of appeal to the city council. (Ord. 1118 § 2 (part), 2009)

#### **13.26.180 Remedies cumulative.**

The remedies set forth in this chapter are cumulative to any other remedy available to the city. Pursuit of one remedy shall not preclude any other remedy, and nothing contained in this chapter shall limit or be deemed to prevent the city from pursuing any other remedy available to the city under the Folsom Municipal Code or other applicable law. (Ord. 1118 § 2 (part), 2009)

#### **13.26.190 Variances.**

In unusual circumstances, application of this chapter may cause unnecessary hardships or results inconsistent with this chapter's purposes and intent. Therefore, variances to some of the requirements of this chapter may be appropriate as delineated below.

A. Authority to Grant Variances. The director may grant variances from this chapter's provisions during a stage one, two, or three conservation stage as specified in Section [13.26.080](#), Water use restrictions. During stage four or five conservation stage as specified in that section, any previously granted variances shall be suspended without notice, unless they are based on a critical health need as determined by a licensed medical professional, with such determination being provided to the director.

B. Landscape Variances. Applications for landscape variances shall be obtained from, and filed with, the utilities department. The director may grant any such applications in his or her discretion in light of the condition of the water supply for the city water system. Any such variance shall be subject to the conditions presented in the water conservation program and landscape guidelines.

C. Other Variances. Customers who seek a variance from this chapter for any reason other than the needs of new landscaping shall submit to the utilities department a written request for variance, setting forth, in detail, the extraordinary circumstances

that support the application. The director may approve the application in his or her discretion; provided, that the variance allows the applicant to use only the minimum amount of water in addition to that allowed by this chapter that the director reasonably believes is necessary to satisfy the circumstances that support the application. Any such variance shall terminate one year after its issuance, subject to an application for its renewal. (Ord. 1118 § 2 (part), 2009)

### **13.26.200 Fire and other emergencies.**

Nothing in this chapter limits, or may be construed as limiting the availability of water for extinguishing fires, meeting the demands of any other similar emergency, or routine inspection and maintenance of fire hydrants. (Ord. 1118 § 2 (part), 2009)



Sections:

13.24.010Water main service connection pipe--Size requirements.

13.24.020Water main service connection pipe--Cover requirement.

13.24.030Street construction--Permit required.

13.24.040Permit--Issuance regulation--Fees.

13.24.050Water connection charges.

13.24.060Collection of connection charges.

**13.24.010Water main service connection pipe--Size requirements.**

No person shall install pipe from a water main service connection to the property line of the property to be served from the water main of a diameter of less than one and one-half inches or one inch copper pipe and a shutoff valve shall be installed ahead of any take-off. (Prior code § 4200)

**13.24.020Water main service connection pipe--Cover requirement.**

No person shall install water service pipes from water mains in the streets and alleys of the city to the property line with a covering of earth and/or surfacing material over the top of such water service pipes of less than one foot. (Prior code § 4201)

**13.24.030Street construction--Permit required.**

No person shall make any excavations, install any water pipes, gas pipes, sewer pipes, drain pipes or do any other construction in or upon the streets, without first obtaining a permit from the city council. (Prior code § 4202)

**13.24.040Permit--Issuance regulation--Fees.**

The city council shall establish rules for the issuance of permits for the doing of such work and may fix a fee for such permits. (Prior code § 4203)

**13.24.050Water connection charges.**

A.The fee for the connection of water pipes to the city water system shall be established by resolution adopted by the city council of the city.

B.Fees are payable at the time the permit for connection to the water system is issued.

C.The city council may enter into agreements for waiver of fees or reimbursements for major water facilities installed by developers. Major water facilities include treatment capacity, storage, pumping, water transmission mains over twelve inches in diameter, and associated appurtenances.

D.Fire service standby pipes shall not be subject to a connection charge.

E.The water connection fee shall be evaluated periodically and adjusted as necessary to insure an adequate level of funding major water project costs. (Ord. 503, 1983; Ord. 451, 1982; Ord. 365 § 1, 1978; Ord. 329 § 1, 1975; Ord. 326 § 1, 1975; Ord. 321 § 1, 1951)

**13.24.060Collection of connection charges.**

Charges shall be collected prior to issuance of a permit to connect to the city water system. The funds collected from this charge shall be deposited in the water fund of the city, to be expended therefrom for water system purposes only, as directed by the city council. (Ord. 427, 1981)

**Chapter 13.22****WATER SYSTEM CROSS-CONNECTION CONTROL**

## Sections:

- [13.22.010](#)Definitions.
- [13.22.020](#)Application.
- [13.22.030](#)City responsibility.
- [13.22.040](#)Cross-connection control program.
- [13.22.050](#)Evaluation of hazard.
- [13.22.060](#)Level of cross-connection protection required.
- [13.22.070](#)Approval of backflow prevention devices.
- [13.22.080](#)Location of backflow prevention devices.
- [13.22.090](#)Backflow prevention device testing, maintenance, and inspection.
- [13.22.100](#)Responsible customer representative.
- [13.22.110](#)Temporary backflow protection devices.
- [13.22.120](#)Backflow prevention device repair, replacement and relocation.
- [13.22.130](#)Discontinuance of water service.
- [13.22.140](#)Unauthorized activity.
- [13.22.150](#)Violation declared a nuisance.
- [13.22.160](#)Enforcement.
- [13.22.170](#)Penalties.
- [13.22.180](#)Remedies cumulative.

**13.22.010Definitions.**

A."Air-gap separation (AG)" means a physical break between the supply line and a receiving vessel or drain. The air-gap shall be at least two diameters of the supply pipe measured vertically above the top rim of the vessel or drain and in no case less than one inch.

B."Approved backflow prevention device (ABPD)" means an effective assembly used to prevent backflow into a potable water system which has passed laboratory and field tests by a testing organization recognized by the CDPH and is listed on the approved and published list maintained by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC-FCCCRR).

C."Approved water supply" means the city's potable water supply or any other water supply that is regulated by CDPH.

D."Auxiliary supply" means any water supply other than a potable supply regulated by CDPH that is available to the customer.

E."Backflow" means the reversal of flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of a potable supply of water from any source or sources.

F."CDPH" means the California Department of Public Health.

G."CA-NV Section AWWA" means the California-Nevada Section of the American Water Works Association (AWWA).

H."Certified backflow prevention assembly tester" means an individual who holds a current certificate as a backflow prevention assembly tester as issued by CA-NV Section AWWA, or equivalent organization as recognized by CDPH and is certified by Sacramento County's health officer.

I."City" means the city of Folsom.

J."City water system" means those facilities within and without the city of Folsom that the city uses to deliver potable water as the CDPH recognized water purveyor.

K."Contamination" means degradation of the quality of the potable water by any substance which creates a hazard to the public health or which may impair the usefulness or quality of water.

L."Cross-connection" means any unprotected actual or potential connection between a public or customer's potable water system and any source or system through which it is possible to introduce into any part of the potable system any used water, contaminant or other substance other than the potable water with which the system is supplied.

M."Cross-connection control specialist" means an individual who holds a valid certificate as a cross-connection control specialist as issued by CA-NV Section AWWA, or equivalent organization as recognized by CDPH and has been designated as the city's cross-connection control specialist by the department.

N."Customer" means any person or entity including the city using water supplied by the city water system. "Customer" includes tenants of single-family dwellings or duplexes, owners of real property and management companies responsible for



property management of real property.

O."Department" means the city of Folsom utilities department.

P."Director" means the city of Folsom director of utilities or his or her designee unless otherwise stated or indicated by context.

Q."Discontinued service" means having the water service turned off by the department.

R."Double check valve backflow prevention assembly (DC)" means an assembly composed of two independently acting check valves, including shut-off valves and test cocks, that is an ABPD.

S."Fire chief" means the fire chief of the city of Folsom, or designee unless otherwise stated or indicated by context.

T."Premises" means any and all areas on a customer's property which are served or have the potential to be served by the city water system.

U."Private fire service" means a private fire service main and appurtenances installed in accordance with NFPA 24 on private property and maintained by the property owner for the explicit intent of providing fire flows either through fire hydrants, fire sprinkler systems, or other water-based fire protection systems.

V."Reclaimed water" shall mean wastewater or other water which as a result of treatment is suitable for nonpotable use.

W."Reduced pressure principle backflow prevention device (RP)" means a device incorporating two check valves and an automatically operating differential relief valve located between the two checks, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing, that is an ABPD.

X."Service connection" shall refer to the point of connection of the customer's piping to the city's water system.

Y."Single-family dwelling unit" means a building designed for one family and containing one kitchen.

Z."Water distribution supervisor" means the water distribution supervisor in the department or his or her designee unless otherwise stated or indicated by context. (Ord. 1136 § 2 (part), 2010)

### **13.22.020 Application.**

The provisions of this chapter shall apply to all customers of the city water system. (Ord. 1136 § 2 (part), 2010)

### **13.22.030 City responsibility.**

The city, and its duly authorized employees, shall operate the public water system and implement a cross-connection control program. The purpose of this chapter is: (A) protect the city water system against actual or potential cross-connections by isolating within the premises contamination that may occur because of some undiscovered or unauthorized cross-connection on the premises; (B) eliminate existing connections between potable water systems and nonpotable systems that create a hazard to public health; (C) eliminate existing cross-connections between potable water systems and sources of contamination; and (D) prevent the making of cross-connections in the future. (Ord. 1136 § 2 (part), 2010)

### **13.22.040 Cross-connection control program.**

A.The director is authorized to develop a cross-connection control program that is consistent with the intent of this chapter, CDPH regulations, California Code of Regulations, and any applicable laws. At a minimum, the program shall have the following elements:

1. Conducting surveys as required identifying those water users where cross-connections are likely to occur;
2. Require the provision of backflow protection by the water user at the water user's service connection(s) or within the user's premises or both if required based on the potential for a cross-connection;
3. Establishment of procedures for testing backflow prevention devices, and maintenance of records of locations, tests, and repairs of these devices; and
4. Maintain a list of certified backflow prevention assembly testers based on Sacramento County health department's list.

B.The director shall oversee this chapter's implementation, compliance with CDPH Regulations, and any laws regulating cross-connection control. (Ord. 1136 § 2 (part), 2010)

### **13.22.050 Evaluation of hazard.**

The department is authorized to evaluate the degree of potential health hazard to the city water system which may be created either as a result of conditions existing or potential created by a customer on their premises. The department shall not be responsible for abatement of cross-connections which may exist on the customer's premises. Evaluation of the potential for health hazard, as a minimum, shall consider: (1) existence of cross-connections; (2) nature of materials on the premises and method of handling; (3) probability of backflow occurring; and (4) complexity and potential for modifications of piping system.

A.In the evaluation of the degree of potential hazard, consideration shall be given to premises with the following conditions:

- 1.Substances harmful to health handled in a manner which could permit their entry into the city water system. This includes chemical and biological process waters, water from an approved water supply which has been subjected to deterioration in sanitary quality, and water from an auxiliary supply.
- 2.Internal cross-connections that are not corrected or abated to the satisfaction of the cross-connection control administrator.
- 3.Cross-connections are likely to occur and entry is restricted so that cross-connection inspections cannot be made on short notice or with the frequency given in Section [13.22.090](#) to assure that cross-connections do not occur.
- 4.Repeated history of cross-connections being established or reestablished.

B.Periodic inspections of the customer's premises may be required either to evaluate the potential for cross-connections or adequacy of backflow prevention devices or practices. These inspections may be in response to activities such as changes in use or ownership of the premises. The city shall provide twenty-four hours' notice prior to inspection of the premises, unless conditions dictate that a longer or shorter notice period is more reasonable. Failure to provide the city with access to conduct an inspection shall constitute a violation of this chapter.

C.Cross-connection control requirements in this chapter shall be included as a condition of approval for water service for any new development or redevelopment project, with the exception of single-family dwelling units. Plans and specifications for any project other than single-family dwelling units requiring a building permit shall be subject to review and approval by the cross-connection control specialist for conformance with this chapter. Any single-family dwelling unit that includes an on-site domestic water or wastewater pump station shall also be subject to review and approval by the cross-connection control specialist for conformance with this chapter. (Ord. 1136 § 2 (part), 2010)

### **13.22.060 Level of cross-connection protection required.**

The level of protection required shall be commensurate with the degree of potential public health hazard that exists or potentially exists on the customer's premises.

The minimum level of protection for all applications shall be a reduced pressure principle backflow prevention device (RP) with the exception that the retrofit of fire protection systems, private and public, without access to an auxiliary supply or other cross-connection shall be subject to the conditions of the permit from the fire department required for modifications to the fire system in accordance with Chapter [8.36](#). The customer may choose a higher level of protection than that required by the cross-connection control program; however, the customer shall be responsible for installation in accordance with Section [13.22.080](#). (Ord. 1136 § 2 (part), 2010)

### **13.22.070 Approval of backflow prevention devices.**

The cross-connection control specialist, after determining the level of protection required per the requirements of Sections [13.22.050](#) and [13.22.060](#), shall approve the backflow prevention device to be installed. The proposed device shall be an approved backflow prevention device as defined in this chapter and shall be located per the requirements of Section [13.22.080](#). Any interior or exterior coating of the backflow prevention device shall be American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 approved coating, in accordance with AWWA specification. (Ord. 1136 § 2 (part), 2010)

### **13.22.080 Location of backflow prevention devices.**

A.Backflow prevention devices shall be located as close as practical to the customer's connection and shall be a minimum of twelve inches and a maximum of thirty-six inches above finished grade as measured from the bottom of the device. Alternative locations shall be subject to review and approval in writing by the cross-connection control specialist. There shall be a minimum of twelve inches of side clearance on the side with the test cocks.

B.Air-gap separation device (AG) shall be located as close as practical to the customer's connection and all piping between the customer's connection and the receiving tank shall be entirely visible unless impractical based on existing conditions and as otherwise approved in writing by the cross-connection control specialist. (Ord. 1136 § 2 (part), 2010)

### **13.22.090 Backflow prevention device testing, maintenance, and inspection.**

Backflow prevention device testing shall be in accordance with the field test procedures as outlined in the latest edition of Manual of Cross-Connection Control, University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research. All tests shall be performed by a certified tester, from the list of certified testers; results of the test shall be submitted to the department on the forms supplied by the department. No new, repaired, or relocated device that fails the test shall be placed in service.

A.Customers with a backflow prevention device on their premises shall have the device inspected and tested on an annual

basis by a certified tester. The department may require a more frequent testing schedule if it is determined to be necessary based on the criteria presented in Section [13.22.050](#). When devices are determined to be defective they shall be repaired or replaced by the customer within fourteen calendar days or a shorter time period based on any hazardous condition that might impact the city water system or other customer connections, or service will be discontinued. If service is discontinued, the customer shall pay the city's turn on/off service fee, as set by ordinance or resolution of the city council.

B. The department will notify the customer annually that the backflow prevention device needs to be tested. This notice shall contain the date when the testing must be completed, at least thirty days from the date of mailing. If, forty-five calendar days after the date of mailing, the customer has not submitted the required test report, the department will test the backflow prevention device and the customer will be charged a fee for this service as set by ordinance or resolution of the city council. In the event the backflow prevention device fails to pass the test, the customer shall, within fourteen calendar days, either repair or replace the backflow prevention device as provided in this section, or service will be discontinued. The customer shall pay the city's fee for testing the backflow prevention device and the turn on/off service fee if required.

C. Upon completion of a successful test of the backflow prevention device, the customer shall place a department supplied tag on the device that indicates it has been tested and passed, and any other information as directed by the department. Failure to attach a completed tag to the backflow prevention device within fifteen days of submitting the test result shall constitute a violation of this chapter. In the event the tag is removed prior to the next annual inspection, the customer shall pay a tag replacement fee. Tag fees, initial issue and replacement, shall be as set by ordinance or resolution of the city council.

D. Discontinuance of service shall be cause for retesting of the backflow device on the service in accordance with the procedures outlined above. (Ord. 1136 § 2 (part), 2010)

### **13.22.100 Responsible customer representative.**

All customers required to submit a backflow prevention device inspection report per the requirements of Section [13.22.090](#) shall designate an individual responsible for monitoring the backflow prevention device and avoidance of cross-connections during operation and maintenance of the customer's on-site pipelines and equipment, or any modifications thereto. In addition, this representative shall be responsible for notifying the cross-connection control specialist of any potential contamination or pollution of the city water system due to a cross-connection on the customer's premises. Current contact information shall be supplied annually if not more frequently on the inspection report. In the event the department is unable to contact a responsible customer representative after a cross-connection is discovered, service may be temporarily discontinued at the discretion of the director until such testing occurs. (Ord. 1136 § 2 (part), 2010)

### **13.22.110 Temporary backflow protection devices.**

A. Temporary backflow protection devices of all types shall be subject to the approval of the cross-connection control specialist. An inspection report for the device shall be submitted for review and the device shall have a current inspection tag per Section [13.22.090](#).

B. Temporary connections for construction water or other approved uses shall be subject to the conditions and fees identified on the utilities department temporary water use application. (Ord. 1136 § 2 (part), 2010)

### **13.22.120 Backflow prevention device repair, replacement and relocation.**

The customer shall obtain approval from the cross-connection control specialist before a backflow prevention device is replaced or relocated.

A. Repair. A backflow prevention device may be removed for repair; provided, that the water use is discontinued until the device is returned to service, or the service connection is equipped with a temporary backflow prevention device that is approved by the cross-connection control specialist. A device returned to service must be tested and pass before being placed in service in accordance with Section [13.22.090](#).

B. Replacement. A backflow prevention device may be removed and replaced; provided, that the water use is discontinued until the replacement device is installed, tested, and passes before being placed in service in accordance with Section [13.22.090](#).

C. Relocation. A backflow prevention device may be relocated upon approval by the cross-connection control specialist. The relocated device shall continue to provide the current level of protection or higher as determined by the cross-connection control specialist and shall satisfy installation requirements as given in Section [13.22.080](#). The device shall be tested and pass before being placed in service in accordance with Section [13.22.090](#). (Ord. 1136 § 2 (part), 2010)

### **13.22.130 Discontinuance of water service.**

A. The director may discontinue service to a customer's nonfire connection to the city water system at the time the director issues to the customer a second notice of violation of any provision of this chapter or determines that immediate discontinuance is necessary for the protection of the city's water system. If the customer's water service is discontinued due to

violations of this chapter, the customer shall be subject to penalties specified in Section [13.22.170](#). Upon seeking renewed service from the city, the backflow prevention device being returned to service must be tested in accordance with Section [13.22.090](#). The customer shall pay the city's water turn off/on service fee and any other appropriate fees as set by ordinance or resolution of the city council. Any decision by the director to discontinue service may be appealed as specified in Section [13.22.170\(C\)](#).

B. Property owners with private fire services, upon being issued a notice of violation by the director of any provision of this chapter, shall have thirty calendar days to submit a plan of correction to the director. Prior to making any modifications or alterations to the on-site fire service, a permit shall be obtained from the fire department in accordance with Chapter [8.36](#). Failure to comply with this section shall subject the property owner to the penalties specified in Section [13.22.170](#), and the service may be discontinued at the discretion of the director and the fire chief when discontinuance is required to protect the city water system or other customer connections. Devices used on fire services shall be approved by the CDPH and listed for fire service use and maintained in accordance with State Fire Marshall regulations. (Ord. 1136 § 2 (part), 2010)

#### **13.22.140 Unauthorized activity.**

A. Any temporary or permanent connection to the city water system made without review by the department, whether it needs a backflow prevention device or not, shall subject the customer to the penalties specified in Section [13.22.170](#).

B. Any person who makes, maintains, or causes to be maintained a temporary or permanent cross-connection shall be subject to the penalties specified in Section [13.22.170](#).

C. Any customer who maintains any plumbing fixture as defined by the California Plumbing Code, or other appurtenance that discharges to a sanitary sewer, which by reason of its construction may or potentially may cause contamination of the city water system shall be subject to the penalties specified in Section [13.22.170](#). (Ord. 1136 § 2 (part), 2010)

#### **13.22.150 Violation declared a nuisance.**

Any activity in violation of this chapter will adversely and seriously affect the public health, safety and welfare, is hereby declared to be a public nuisance and may be remedied as provided in this chapter, any other applicable portion of the Folsom Municipal Code or applicable state law. (Ord. 1136 § 2 (part), 2010)

#### **13.22.160 Enforcement.**

A. This chapter shall be enforced pursuant to the provisions of Chapters [1.08](#) to [1.10](#), inclusive, and any other enforcement mechanism available to the city under the Folsom Municipal Code and/or applicable law.

B. Unless otherwise expressly provided in this chapter, the director shall enforce the provisions of this chapter. (Ord. 1136 § 2 (part), 2010)

#### **13.22.170 Penalties.**

A. The goal of the provisions of this chapter is to achieve voluntary compliance from the customer, and the city will take reasonable measures to assure the customer has information available to promptly and efficiently address cross-connection control issues. Where voluntary compliance cannot be achieved through initial contacts and warnings, then appropriate administrative penalties and further action are required. Except as otherwise provided herein, violations of any provision of this chapter shall be addressed as follows:

<b>Violation</b>	<b>Penalty</b>
First	Written notification and issuance of a notice to correct.
Second	Issuance of an administrative penalty, discontinued water service and/or other penalties as provided in the notice of violation and as determined by the utilities director.

#### **B. Penalties.**

1. A violation of this chapter shall also be an administrative violation as defined in Section [1.08.020](#).

2. Each of the sanctions for administrative violations identified in Section [1.09.013](#) shall be available for enforcement of the provisions of this chapter. Based on the criteria for imposition of administrative sanctions set forth in Section [1.09.014](#), each day a violation of this chapter continues it shall be deemed a Level A violation as that term is described in Section [1.09.012](#) with an initial penalty of up to one hundred dollars.

3. Violations of this chapter which are deemed to be willful noncompliance or unlawful connections may be subject up to a Level E violation as determined by the director.

C. Appeal. There shall be no appeal of the level of protection required as identified in Section [13.22.060](#) and any appeal of administrative penalties shall follow the request for hearing procedures provided in Chapter [1.09](#). Any order to discontinue water service or any other orders or decisions of the director shall be appealable to the city manager pursuant to Section [2.08.060](#); provided, however, that the city manager's decision shall be final and there shall be no right of appeal to the city council. (Ord. 1136 § 2 (part), 2010)

#### **13.22.180 Remedies cumulative.**

The remedies set forth in this chapter are cumulative to any other remedy available to the city. Pursuit of one remedy shall not preclude any other remedy, and nothing contained in this chapter shall limit or be deemed to prevent the city from pursuing any other remedy available to the city under the Folsom Municipal Code or other applicable law. (Ord. 1136 § 2 (part), 2010)

**Title 13**

**WATER AND SEWAGE**

**Chapters:**

**13.03 Regulations to Prohibit and Control the Discharge of Fat, Oil and Grease into the Sanitary Sewer Collection System**

**13.04 Municipal Sewer System—Definitions**

**13.08 Municipal Sewer System—Regulations**

**13.12 Municipal Sewer System—Rental Regulations**

**13.16 Septic Tanks, Cesspools and Privies—Definitions**

**13.20 Septic Tanks, Cesspools and Privies—Regulations**

**13.22 Water System Cross-Connection Control**

**13.24 Utilities Connections**

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**CHARTER**

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# CHARTER OF THE CITY OF FOLSOM, CALIFORNIA

March 6, 1990

### **Preamble:**

The citizens of the City of Folsom do enact and establish this Charter in order to form a better City government for all citizens of Folsom, to provide for the public health, safety, welfare and morals, to improve the means of cooperation and assistance with neighboring governmental jurisdictions, and to preserve and enhance the quality of life for Folsom's citizens, their children, and their neighbors.

Through adoption and enactment of this City Charter the citizens of the City of Folsom hereby do declare their express intent and purpose to be and to remain forever a separate and independent City.

### **Boundaries of City:**

The boundaries of the City of Folsom shall be as now established and as may be changed in the future as provided by law.

## ARTICLE I. POWERS OF THE CITY

### **1.01.Powers of the City:**

The City shall have all powers possible for a city to have under the Constitution and laws of the State of California as fully and as completely as though they were specifically enumerated in this Charter.

A.General Law Powers. Nothing in this Charter shall be construed to prevent or restrict the City from exercising or consenting to, and the City is hereby authorized any and all rights, powers and privileges heretofore or hereafter granted or prescribed by general laws of the state.

B.Municipal Affairs. The City may make and enforce all ordinances and regulations in respect to municipal affairs, subject only to restrictions and limitations provided in this Charter and in respect to other matters subject to applicable general laws. As regards municipal affairs, this Charter shall supersede all laws inconsistent therewith.

C.Intergovernmental Powers. The City may exercise any of its powers or perform any of its functions and may participate in the financing thereof, jointly or in cooperation, by contract or otherwise, with any 1 or more states and the State of California, or any state civil division or agency, or the United States or any of its agencies.

D.Construction. The powers of the City under this Charter shall be construed liberally in favor of the City, and the specific mention of particular powers in the Charter shall not be construed as limiting in any way the general powers granted in this Article or by this Charter.

## ARTICLE II. MAYOR AND CITY COUNCIL

### **2.01.City Council:**



There shall be a City Council of 5 members elected by the voters of the City at large.

- A.Registered Voters Eligible. Only resident registered voters of the City shall be eligible to hold the office of Councilmember.
- B.Regular Election. The regular election of Councilmembers shall be held on the second Tuesday of November in even-numbered years, in the manner provided by state law.
- C.Councilmember Term. The terms of Councilmembers shall be 4 years and shall begin the second Monday in December following their election and qualification.
- D.Staggered Terms. The terms of Councilmembers shall be staggered, with 3 Councilmembers being elected in 1990 and each 4 years thereafter, and 2 Councilmembers in 1992 and each 4 years thereafter.

## **2.02.General Powers of the City Council:**

All powers of the City shall be vested in the City Council, except as otherwise provided by this Charter, and the Council shall provide for the exercise thereof and for the performance of all duties and obligations imposed on the City by law.

## **2.03.Mayor:**

There is hereby created the office of Mayor. Only a member of the City Council shall be eligible to hold the office of Mayor. The Council shall select the Mayor, who shall serve as Mayor at the pleasure of the Council.

## **2.04.Duties of Mayor:**

The Mayor shall be the representative of the City. The Mayor shall:

- A.Recommend City policy;
- B.Recommend to the Council appropriate and necessary legislation;
- C.Recommend programs for the physical, economic, social and cultural development of the City;
- D.Be responsible for public relations activities and represent the City for ceremonial purposes;
- E.Represent the City in intergovernmental relations, personally or by a representative designated by him/ her with the concurrence of the Council;
- F.Preside at meetings of the Council;
- G.Establish and dissolve ad hoc committees, subject to the approval of the Council, but no such committee shall exist for more than 1 year;
- H.Possess the authority to suspend implementation of any action taken by the Council, excepting an emergency ordinance, by filing with the City Clerk, within 3 days after such Council action, a notice of suspension thereof. Such suspension shall constitute a motion for reconsideration of the action taken, to be voted on by the Council at its next regular meeting, provided, however, that this authority shall be applied only once per specific action item;
- I.Provide leadership and marshal citizen participation in City activities and civic affairs;
- J.Report to the public from time to time on the affairs of the City;
- K.Be, and possess the authority and attributes of a Councilmember;
- L.Meet regularly and as appropriate with the City Manager for the purpose of providing policy guidance relative to the actions of the Council, expressing the desires of the Council and its members, and to monitor the administrative implementation of Council policies;
- M.Together with the Council, at least annually evaluate the performance of the City Manager;
- N.Possess such authority and perform such duties as are granted or required by this Charter or by the Council, which additional duties shall not conflict with any other provision of this Charter.

## **2.05.Vice Mayor:**

There is hereby created the office of Vice Mayor. The City Council shall select the Vice Mayor, who shall serve as Vice Mayor at the pleasure of the Council. In the absence of the Mayor, the Vice Mayor shall possess and perform the duties of the Mayor.

## **2.06.City Council Compensation and Expenses:**

The City Council may determine the annual salary of the Mayor, Vice Mayor, and Councilmembers by ordinance, but no ordinance increasing such salary shall become effective until the date of commencement of the terms of Councilmembers elected at the next regular election. The Mayor, Vice Mayor and Councilmembers shall receive their actual and necessary expenses incurred in the performance of their duties of office.

**2.07.Prohibitions on City Council:**

A.Restriction on Holding 2 Offices. Except where authorized by state law, no Councilmember shall hold any other elected public office during the term for which the member was elected to the Council. No Councilmember shall hold any other City office or City employment during the term for which the member was elected to the Council. Nothing in this Section shall be construed to prohibit the Council from selecting any current or former Councilmember to represent the City on the governing board of any regional or other intergovernmental agency.

B.Restriction on Personnel Powers. Neither the Council nor any of its members shall in any manner control or demand the appointment or removal of any City department head or employee whom the City Manager or any subordinate of the City Manager is empowered to appoint. But the Council may express its views and fully and freely discuss with the City Manager anything pertaining to appointment and removal of such department heads and employees.

C.Restriction on Interference With City Manager. Neither the Mayor nor any Councilmember shall interfere with the execution of the powers and duties of the City Manager. Except for purposes of inquiry, the Mayor and Councilmembers shall deal with the administrative service solely through the City Manager and neither the Mayor nor any Councilmember shall give orders to any subordinate of the City Manager, either publicly or privately.

D.Restriction on City Utility or Enterprise. No City owned utility or enterprise, or any portion thereof, which lies within the corporate boundaries of the City may be sold, leased for more than 2 years, contracted to, or put to franchise to any non-governmental party without complying with the procedures set out in Section 7.02 hereof, and being approved by a majority vote at an election.

**2.08.Council Vacancies and Forfeiture of Office:**

A.Vacancy. The office of a Councilmember shall become vacant upon the member's death, resignation, removal from office or forfeiture of office in any manner authorized by state law. The method of filling vacancies on the City Council shall be as provided by state law.

B.Forfeiture of Office. A Councilmember shall forfeit that office if the Councilmember:

- 1.Lacks at any time during the term of office for which elected any qualification for the office prescribed by this Charter or by law,
- 2.Violates any express prohibition of this Charter,
- 3.Is convicted of a crime involving moral turpitude, or
- 4.Fails to attend 3 consecutive regular meetings of the Council without being excused by the Council.

**2.09.Public Participation:**

No one shall be denied the right, personally or through counsel, to present grievances or offer suggestions for the betterment of municipal affairs at any regular meeting of the City Council, nor to speak to the subject of any special meeting.

The Council shall by ordinance encourage the organization of and communication with representative neighborhood groups throughout the City to:

A.Encourage citizen participation;

B.Seek advice and input on and provide information to the public relative to City matters and affairs.

**2.10.Council Organization, Meetings and Rules:**

Selection of officers of the City Council, the time and place of regular meetings, the method of calling meetings, the rules of order for the conduct of proceedings by the Council, and the order of succession in the event of a vacancy in the office of Mayor and Vice Mayor shall be as established by ordinance.

**2.11.Independent Audit:**

The City Council shall provide for an independent annual audit of all City accounts and financial documents and may provide for more frequent or more specialized audits as it deems necessary.

A.Auditor To Have No Interest in City Affairs. All audits shall be made by a certified public accountant firm experienced in City auditing. The audit firm shall have no personal interest, direct or indirect, in the fiscal affairs of the City government or any of its officers, and may not provide services to the City other than audit services.

B.Designation of Auditor. The Council shall, through a request for qualifications and proposal process, designate such audit firm annually or for a period not exceeding 3 years, but the designation for any particular fiscal year shall be made no later than 30 days before the beginning of such fiscal year.

C.Comprehensive Audit and Evaluation. The annual audit shall be comprehensive of all departments and agencies, and shall

include an evaluation of the city budgeting and accounting system as to compliance with generally accepted accounting principles and modern practices for an integrated and computerized city financial management system utilizing all possible modern accounting and control techniques and procedures.

D.Audit Submitted at Regular Meeting. The annual audit shall be submitted to the Council at a regular meeting and shall be open to public inspection.

## **2.12.Ordinances in General:**

Ordinances adopted by the City Council shall be enacted or repealed in the form: "The City Council of the City of Folsom hereby does ordain."

A.Form of Ordinance. Every proposed ordinance shall be introduced in writing and in the form required for final adoption. An ordinance may be read by Title only at the time of its introduction, and must be available to the public in full text when introduced.

No ordinance shall contain more than 1 subject, which shall be clearly expressed in its title.

B.Adoption of Ordinance. An ordinance may be introduced by any Councilmember at any regular or special meeting of the Council. The second reading and adoption of the introduced ordinance shall be conducted at a regular, adjourned, or special meeting of the Council, which meeting shall be not less than 5 calendar days after its introduction. The ordinance may be read by title only at second reading.

C.Ordinance Availability. The public shall have an opportunity to be heard on the proposed ordinance at any meeting the proposed ordinance is considered. The City Clerk shall be provided a copy of any proposed ordinance prior to its introduction and adoption. Copies of proposed ordinances shall be made available to the public or interested persons at a reasonable cost.

D.Ordinance Effect. All ordinances other than emergency ordinances shall go into effect 30 days after adoption, or such later date as may be specified in the ordinance or state law.

E.Publication of Ordinance. The City Clerk shall publish every ordinance adopted by the City Council within 20 days following such adoption in a newspaper of general circulation in the City or, in the case where there is no newspaper of general circulation in the City, by posting in 3 public places accessible to the public. The ordinance may be published in full text or as a brief summary thereof.

## **2.13.Emergency Ordinances:**

To meet a public emergency affecting life, health, public welfare, property or the public peace, the City Council may adopt emergency ordinances, but such ordinances may not levy taxes, grant, renew or extend a franchise, or authorize the borrowing of money except as provided herein for emergency appropriations.

A.Form and Manner of Emergency Ordinance. An emergency ordinance shall be introduced in the form and manner prescribed for ordinances generally, except that it plainly shall be designated as an emergency ordinance and shall contain, after the enacting clause, a declaration stating that an emergency exists and describing the emergency in clear and specific terms.

B.Four Votes Required. An emergency ordinance may be adopted with or without amendment or rejected at the meeting at which it is introduced, but the affirmative vote of at least 4 of the members of the Council shall be required for adoption.

C.Publication of Emergency Ordinance. After adoption an emergency ordinance shall be published and printed as prescribed for other adopted ordinances. An emergency ordinance shall become effective upon adoption or at such later time as it may specify.

DAutomatic Repeal of Emergency Ordinances. Every emergency ordinance shall automatically stand repealed as of the 121st day following the date on which it was adopted, but this requirement shall not prevent re-enactment of the ordinance in the manner specified in this section if the emergency still exists. An emergency ordinance may also be repealed by adoption of a repealing ordinance in the same manner specified in this section for adoption of emergency ordinances.

## **ARTICLE III. CITY MANAGER**

### **3.01.City Manager Appointment:**

The City Council shall appoint a City Manager for an indefinite term through the mechanism of an employment agreement the same as those afforded department heads under this Charter. The City Manager:

A.Serve At Pleasure. Shall serve at the pleasure of the Council;

B.Chief Executive. Shall be the chief executive and administrative officer of the City;

C.How Chosen. Shall be chosen solely on the basis of administrative qualifications and, at time of appointment need not be a resident of the State or City;

D.Salary. Shall be paid a salary fixed by the Council commensurate with the responsibilities of the position;

E.Dismissal Hearing. Shall have the right to a public hearing on any motion to remove or to suspend his/her employment, which public hearing shall be held only after provision of 10 days' published notice prior to the Council voting on the motion to remove or to suspend the City Manager.

### **3.02.Restriction on Dismissal.**

During a period of 90 days immediately following the date of installation of any person newly elected to the Council at a regular or special City election, or of any person newly appointed to the Council, the Council shall take no action, whether immediate or prospective, to remove, suspend, request the resignation of, or to reduce the duties, salary or benefits of the City Manager.

### **3.03.Powers and Duties of City Manager:**

The City Manager shall be responsible to the City Council for the proper administration of all affairs of the City and:

A.Appointment of Employees. Shall appoint, remove and discipline all employees of the City pursuant to requirements set out in this Charter;

B.Delegation of Authority. May delegate the appointment, removal and discipline of subordinate employees to the department heads to which those employees are assigned, but shall approve, modify or disapprove all recommendations for such appointment, removal, and disciplinary actions to be taken against employees by department heads or other employees of the City;

C.Supervision of Departments. Shall direct and supervise the administration of all departments, offices and agencies of the City;

D.Annual Budget. Shall annually prepare, submit, and administer the budget and capital improvement plan of the City as set out in this Charter;

E.Keep Council Informed. Shall keep the Council advised of the financial condition and future needs of the City, and make such recommendations to the Council concerning the affairs of the City as are deemed necessary or desirable;

F.Enforce Laws and Contracts. Shall provide for enforcement and faithful execution of all laws, regulations and rules of the City, all provisions of this Charter, and all acts of the Council, and shall administer all contracts of which the City is a party;

G.Submit Reports. Shall submit to the Council and make available to the public a comprehensive annual financial and administrative report on the finances and activities of all City departments and agencies, which report shall be filed with the City Council within 6 months of the end of each fiscal year;

H.Make Reports. Shall make such other reports to the Council as it may require or the City Manager may desire, concerning the operations of City departments, offices and agencies;

I.Restrictions. Shall engage in no incompatible business, occupation or activities;

J.Attend Meetings. Shall attend all Council meetings and have the right to take part in discussion but shall have no vote, except the City Manager may not be entitled to attend closed sessions of the Council when dismissal of or other disciplinary actions involving the City Manager are discussed;

K.Participation. Shall be entitled to participate in the deliberations of any City board, committee, and commission, but shall not have a vote therein;

L.Receive Notices. Shall receive notice of all meetings of the City Council, boards, committees, and commissions;

M.Other Duties. Shall perform such other duties consistent with this Charter as may be required by the Council.

### **3.04.City Manager's Office:**

The City Manager shall appoint such professional assistants as he/she shall determine to be needed to positions authorized by the Council.

A.Service of Assistants. Such assistants shall serve at the pleasure of the City Manager and, for the purposes of terms and conditions of employment, shall be considered to be department heads.

B.Duties of Assistants. Such assistants shall have such powers and perform such duties as are specified by the City Manager.

C.Secretary. The Secretary to the City Manager shall serve at the pleasure of the City Manager but shall have permanent status subject to all rights and limitations in the City merit system.

D.Acting City Manager. The City Manager shall in writing by letter filed with the City Clerk designate an Acting City Manager on those occasions the City Manager will be absent from the City for longer than 48 hours. The Council shall designate an Acting City Manager in the event of the disability of or at the request of the City Manager.

## **ARTICLE IV. DEPARTMENTS, AGENCIES AND EMPLOYEES**

**4.01. Departments and Department Heads:**

The City Manager shall recommend and the City Council shall by ordinance create, reorganize and abolish departments and divisions thereof as necessary for the effective management of the City's affairs, in addition to those created by this Charter.

A. Department Head Appointments. The City Manager shall appoint a head of each department, which department head shall be qualified in the field of expertise encompassed within the department of assignment.

B. Department Head Removal. All department heads shall serve at the pleasure of the City Manager and be subject to the direction and supervision of the City Manager.

C. Requirements. Department heads shall be City employees for the purposes of powers and duties, and shall be provided employment agreements by the City Manager setting out the terms and conditions of employment, pay, benefits, goals and objectives, a requirement for periodic and regular performance evaluations, obligations, and termination.

**4.02. City Clerk:**

The office of City Clerk is hereby created. The duties of the City Clerk shall be to act as Clerk to the City Council, to fulfill all duties thereof enumerated in this Charter, to maintain the integrity of and to provide for public access to and inspection of City public records, and to perform all duties required of a City Clerk by state law. The City Clerk shall be a department head.

**4.03. City Attorney:**

The office of City Attorney is hereby created. The City Attorney shall be the chief legal officer of the City, and:

A. Duties. Shall advise the City Council, individual Councilmembers, the City Manager and his/her assistants, and department heads regarding the law relating to City affairs.

B. Additional Duties. Shall represent the City in all legal proceedings, prepare all ordinances and other needed legal documents, select and retain specialist counsel where there is a need for such specialized legal services, and perform such other duties as may be prescribed by ordinance.

C. Department Head. May be a full time department head of the City, or may be contracted as a department head.

D. Approval of Contracts. Shall review and approve all City contracts as to legal form.

E. Special Counsel. The City Council may retain special counsel in any matter where representation by the City Attorney would create an impermissible conflict, including the discipline or dismissal of the City Manager.

**4.04. Personnel System:**

The City Council shall provide by ordinance for the establishment, regulation and maintenance of a merit system governing personnel policies necessary to effective administration of the employees of the City's departments and offices.

A. Merit System Components. Such merit system of personnel administration shall include, but not be limited to classification and pay plans, selection processes, force reduction, working conditions, provisional and exempt appointments, discipline and dismissal, in-service training, grievances, relationships with employee organizations, regular and periodic employee performance evaluations, and incentive plans.

B. Employee Selection. The merit system shall provide for open, publicly posted, and competitive employee selection processes utilizing, where and when feasible, validated examinations at entry level and objective evaluative processes for all other classifications.

**4.05. Planning Commission:**

There shall be a Planning Commission of 7 members, each of whom must be a resident and registered voter of the City. Each member of the Council shall appoint 1 member whose term shall run concurrent with that of the Councilmember so appointing. Two members shall be appointed by the Council for 2-year terms. The powers, duties, qualifications, removal, and compensation, if any, of the Commission shall be set by ordinance.

**4.06. Parks and Recreation Commission:**

There shall be a Parks and Recreation Commission consisting of 7 members, each of whom must be a resident and registered voter of the City. Each member of the Council shall appoint 1 member whose term shall run concurrent with that of the Councilmember so appointing. Two members shall be appointed by the Council for 2-year terms. The powers, duties, qualifications, removal, and compensation, if any, of the Commission shall be set by ordinance.

**4.07.Boards and Commissions:**

The City Council may by ordinance create other Boards and Commissions and prescribe their powers and duties, determine the number and qualification of the members, their method of selection, term of office and removal, and fix their compensation, if any. All boards and commissions only shall be advisory to the Council. Each member of any Board or Commission shall be a resident and registered voter of the City.

**ARTICLE V. FINANCIAL PROCEDURES****5.01.General Tax Limits and Procedure:**

The City Council may not levy a property tax for general municipal purposes in excess of the maximum rate applicable to the City on the effective date of this Charter provided, however, that a tax in excess thereof may be levied if authorized by state general law, or if authorized by the affirmative votes of a majority of the City's voters voting on a proposition to increase such levy.

A.Statement on Years of Levy. The number of years that any such additional levy is to be made shall be specified in such proposition.

B.Separate Taxing Areas. Nothing herein contained shall preclude the Council from establishing separate taxing areas within the City for the levy of a tax in excess of such maximum rate if authorized by state law, by ordinance, or by the affirmative votes of a majority of the voters within the area voting on a proposition to impose or to increase such levy.

C.Procedure for Assessment. The procedure and authority for the assessment, levy and collection of taxes may be prescribed by ordinance and, in the absence of such an ordinance the procedure and authority applicable thereto shall be that prescribed by state law.

**5.02.Special Funds:**

The City Council shall, by ordinance, establish capital outlay and reserve funds for specified capital improvement and replacement purposes, and such other special funds as it may deem necessary.

A.Inviolable Funds. Such special funds shall remain inviolable for the purpose for which they were created unless the use of such funds for some other purpose is authorized by an ordinance adopted by a four-fifths vote of the Council after holding of a public hearing.

B.Disposition of Special Funds. Any unexpended and unencumbered balance remaining in any such special fund after the purpose for which the special fund was created has been accomplished shall be transferred by the Council to the General Fund or to the most appropriate other special fund.

**5.03.Investments:**

Investment of monies held by the City and any of its agencies shall be made pursuant to policy set by ordinance. Such policy shall comply with guidelines for the investment of public monies as recommended by Moody's and Standard and Poor's credit rating services.

**5.04.Purchasing and Contracting:**

The City Council shall by ordinance provide for a purchasing and contracting system assuring a maximum of competition for the lowest price consistent with a stated level of quality. The purchasing and contracting system shall provide for:

A.Delegation of Authority. Control of the system by the City Manager, who shall be empowered to make purchases and to award contracts for amounts of \$10,000 or less, adjusted in amount annually as set out herein in Subsection C;

1.Delegation of responsibility by the City Manager to any appointed subordinate;

2.A requirement that should contracts or purchases in amount of \$10,000 or less be awarded to any 1 vendor or contractor cumulatively totalling \$100,000 in any 3-year period then, in that event, the competitive process set out herein shall be followed should such process otherwise be required hereunder;

3.An informal bid solicitation process for purchases and contracts in amount between \$10,001 and \$24,999;

B.Award of Contracts and Purchases. Award of contracts and purchases to the lowest responsible bidder or vendor meeting specifications, except as provided herein and in the ordinance;

C.Sealed Competitive Bids. Sealed bids for competitive purchases involving the expenditure of \$25,000 or more, but this amount and all dollar amounts set out in this section shall be revised by the Council annually as part of the annual budget by a revision factor determined by utilizing reliable indicators or indices of price changes;

D.Waiver of Bids. Waiver of competitive bidding for purchase of noncompetitive items and contracting for services in  
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D.Travel or Dis. Waiver of competitive bidding for purchase of noncompetitive items and contracting for services, in emergencies, for copyrighted and patented items and services, and for professional or specialized services for which a written finding is filed with the City Clerk regarding the reason for noncompetitive, emergency or sole source acquisition;

E.Other Procedures. Provision for step procurement involving request for information, request for proposal, request for technical services, and joint contract or purchase awards for subcontracts, and joint bidding with or purchasing through other governmental jurisdictions;

F.Prohibition. Prohibition of splitting contracts or purchases to avoid dollar limits;

G.Rejections. Rejection by the Council of any and all bids;

H.Bid Bonds. Requirement of a bid bond or certified check for all sealed bids;

I.Public Notification. Full public notification of all calls for sealed bids by provision of 10 days' notice through appropriate publications;

J.Public Works Determinations. Determination of which public works or improvement projects are to be performed by City forces and which are to be let to contract;

K.Other Matters. Other matters as shall be determined to be required by the Council.

### **5.05.Budgeting and Accounting:**

The City Council shall by ordinance provide for an integrated budgeting and financial management system for the City. The ordinance shall provide for the following, which shall be required:

A.Fiscal Year. Establishment of a fiscal year;

B.Annual Budget. An annual budget and budget message by the City Manager for the ensuing fiscal year shall be submitted on or before the first working day of the last month of the current fiscal year;

C.Budget Message. The budget shall include a budget message by the City Manager, which message shall provide an explanation of the budget, both in fiscal terms and in terms of the work programs. The message shall outline the proposed financial policies of the City for the ensuing fiscal year, describe the important features of the budget, indicate any major changes from the current year in financial policies, expenditures, revenues or financial position, together with the reasons for such changes, summarize the City's debt position, and include such other material as the City Manager deems desirable;

D.Comprehensive Financial Plan. The budget shall provide a complete financial plan of all City funds, agencies and activities for the ensuing fiscal year and shall be in such form as the City Manager deems desirable or that the Council may require. The budget shall begin with a clear general summary of its contents; shall show in detail all estimated revenues of all funds and agencies; all carry-over fund balances and reserves; and all proposed expenditures, including debt service, for the ensuing fiscal year. The budget shall contain sufficient salaries to provide a comprehensive and consolidated view of the city's financial position;

E.Contents of Budget. Sections of the budget shall contain:

- 1.The proposed goals and objectives and appropriations for current operations during the ensuing year, detailed for each fund by organization unit, and program, purpose or activity, and the method of financing such proposed appropriations;

- 2.Comparative amounts for actual and estimated income and expenditures for the current fiscal year and actual income and expenditures for the preceding fiscal year;

- 3.Proposed capital expenditures during the ensuing fiscal year, detailed for each fund by organization unit when practicable, and the proposed method of financing each such capital expenditure; and

- 4.Anticipated income, expense, profit, loss, and reserves, and the purpose of said reserves, for each utility and enterprise fund;

F.Overexpenditures Prohibited. The total of proposed expenditures shall not exceed the total of estimated revenues plus carried forward fund balance, exclusive of reserves, for any fund;

G.Budget Adoption. The Council shall adopt the annual budget by affirmative vote of at least 3 members, on or before the last working day of the last month of the current fiscal year. If it fails to adopt the budget by this date the budget proposed by the City Manager shall be deemed adopted;

H.Supplemental Appropriations. Prior to the City Council making any supplemental appropriation the City Manager shall certify that monies in excess of those estimated in the budget are available for appropriation. Any such supplemental appropriation shall be made for the fiscal year by resolution up to the amount of any excess;

I.Emergency Appropriations. A process shall be devised by which the Council can, by four-fifths vote only, make emergency appropriations to respond to a public emergency affecting life, health, public welfare, property or the public peace;

J.Appropriations Reductions. Appropriations may be reduced any time during the fiscal year by the Council or City Manager if it appears probable to either that the revenues or fund balances available will be insufficient to finance the expenditures for

which appropriations have been authorized. When appropriations are reduced the City Manager shall report to the Council at its next meeting, indicating the estimated amount of the deficit, any remedial actions taken, and recommendations as to any other steps to be taken;

K.Budgetary Transfers. The City Manager may transfer monies between departments and divisions, and programs and accounts within departments and divisions, but only the Council by resolution may transfer monies between funds and from unappropriated balances or fund balances to any fund or appropriation account. All such transfers made by the City Manager shall be reported in writing quarterly to the Council;

L.Lapse of Appropriations. All appropriations, except for capital expenditures, shall lapse at the end of the fiscal year to the extent that it has not been expended or encumbered. An appropriation for a capital expenditure shall continue in force until expended, revised, or repealed. The purpose of any such capital appropriation shall be deemed abandoned after 3 years pass without disbursement from or encumbrance against the appropriation;

M.Capital Improvement Plan. A capital improvement plan and budget encompassing 5 or more years shall be prepared and presented, or updated, by the City Manager and presented to the Council each year. The capital improvement plan shall include:

- 1.A general summary of its contents;
- 2.A list of all capital improvements and other proposed capital projects which are proposed to be undertaken during the term of the capital improvement plan, with appropriate supporting information as to the necessity for each proposed project or acquisition;
- 3.Cost estimates and recommended time schedules for each improvement or other capital expenditure;
- 4.Method of financing for each proposed capital project;
- 5.The estimated annual cost of operating and maintaining the facilities to be constructed or acquired;

N.Capital Plan Adoption. The Council shall adopt the capital improvement plan by resolution on or before the beginning of the first fiscal year covered by the plan;

O.Public Document. Copies of the annual budget, annual financial report, the capital improvement plan, and all appropriate summarizing documents, shall be made available to the public for inspection and review;

P.Public Hearing Required. Each of the annual budgets in the capital improvement plans shall be the subject of a public hearing before the City Council. Ten days' posted notice shall be provided for said hearing;

Q.Two Year Budget. A 2-year operational budget may be substituted for the required annual budget, in which case the budget shall be prepared and presented in 2 annual increments and all uses of the term "annual" in this Section may be revised by ordinance to permit the creation of the 2-year budget;

R.Quarterly Reports. Within 30 days after the end of each quarter during the fiscal year, and more often if required, the City Manager shall submit to the Council a financial and management report showing the relation between budgeted and actual revenues and appropriations, expenditures and encumbrances to date.

#### **5.06.Debt:**

The City by ordinance or resolution may issue all manner of securities and incur all manner of indebtedness, but within the following limits:

A.General Obligation Bond Limit. Indebtedness of the City as evidenced by issued general obligation bonds shall at no time exceed 10 percent of the assessed valuation of all property taxable by the City;

B.Other Debt Limit. Indebtedness of the City other than voted general obligation bonds shall at no time exceed 10 percent of the assessed valuation of all property taxable by the City;

C. Definition and Exemption. The term "indebtedness" as used in subsections A and B of this Section shall not include bonds or other obligations denoting indebtedness which are issued for the purpose of financing or refinancing the acquisition, construction, or completion of public improvements or projects, the payment of which is not a general obligation of the City, and which is secured by a lien upon or levy of a special tax on real property within an identified district.

#### **5.07.Depositories:**

The City Council shall designate a depository or depositories for City monies and shall provide for the regular deposit of City monies therein. The Council shall require such security for City deposits as it deems desirable and as is authorized or permitted by law, except that personal surety bonds, of themselves, shall not be deemed proper security.

#### **5.08.Miscellaneous Fiscal Procedures:**

The City Council shall by ordinance provide for the following, which procedures shall comply with state law unless the



ordinance specifies otherwise:

A.Petty Cash. The creation and administration of petty cash funds;

B.Claims and Demands. Claims and demands against the City;

C.Warrants and Checks. Issuance and redemption of warrants and the use of checks drawn on the City treasury; and

D.Actions. Actions against the City.

## **ARTICLE VI. ELECTIONS**

### **6.01.Election Procedures:**

Unless otherwise provided by ordinance, all elections shall be held in accordance with the provisions of the State Elections Code for the holding of municipal elections so far as the same are not in conflict with this Charter.

A.Special Elections. The Council may call special elections for such purposes as the Council may prescribe. A special election may be held on any date specified by the Council.

B.Initiative, Referendum and Recall. The electors of the City reserve to themselves the powers of initiative and referendum and the recall of elective officers, to be exercised in the manner prescribed by the State Elections Code.

## **ARTICLE VII. GENERAL PROVISIONS**

### **7.01.Conflicts of Interest:**

The use of public office for private gain is prohibited. The City Council shall implement this prohibition by ordinance adopting and assuring compliance with the laws of the State of California regarding such conflicts, which ordinance also shall prohibit the following:

A.Appearances For Influence. Appearances by or statements made to, or influence exercised by City officials or employees before or to other City agencies on behalf of private interests;

B.Compensated Influence. A former Councilmember or City officer or employee being compensated in any way for attempting to influence any action of the Council or City for 1 year after the end of service on the Council or with the City;

C.Violations. In addition to any fines or other punishments for violations of conflicts of interest regulations any person convicted of a violation of this section shall be ineligible for a period of 5 years following such conviction to hold any City office or position and if an officer or employee of the City shall immediately forfeit his or her office or position.

### **7.02.Franchises:**

The City Council may grant a franchise to any person partnership, corporation or other legal entity capable of exercising the privilege conferred whether operating under an existing franchise or not and may prescribe the terms conditions and limitations of such grant, including the compensation to be paid to the City therefor.

A.Franchise Ordinance. The Council may prescribe by ordinance the method and procedure for granting franchises together with additional terms and conditions for making such grants.

B.Franchise Procedure. No person, partnership, corporation or other legal entity shall furnish the City or its inhabitants or properties lying within the City limits or any portion of the City with any service which uses any portion of the public streets, ways, easements, alleys or places in the City as the same now exist or may hereafter exist, for any purpose without a City franchise secured under the procedures set out hereunder, except insofar as he/she or it may be entitled to do so by direct authority of the California Constitution, the Constitution or laws of the United States, or final decisions of courts of competent jurisdiction.

C.Franchise Term. No franchise shall be granted for a period of longer than 25 years unless there be reserved to the City the right to take over at any time the works, plant and property constructed under the grant at their physical valuation and without compensation for franchise or goodwill.

D.Acquisition of Properties. No franchise shall in any way or to any extent impair or affect the right of the City to acquire the property of the possessor thereof by purchase or condemnation, and nothing therein contained shall be construed to contract away or to modify or abridge, either for a term or in perpetuity, the City's right of eminent domain with respect to the property of the possessor of any franchise.

E.Franchise Condition. Every franchise granted by the City is granted upon the condition, whether expressed in the grant or not, that such franchise shall not be given any value before any court or other public authority in any proceeding of any character in excess of any amount actually paid by the grantee to the City at the time of the grant.

F.Resolution of Intent. Before granting any franchise, the Council shall adopt a resolution declaring its intention to grant same

and stating the name of the proposed grantee, the character of the proposed franchise, and the terms and conditions upon which it is proposed to be granted. Such resolution shall fix the day, hour and place when and where any person having an interest in or objecting to the granting of such franchise may appear before the Council to be heard thereon. Said resolution shall be published at least once, not less than 10 days prior to said hearing, in the official newspaper.

G.Franchise Adoption. After hearing all persons desiring to be heard, the Council may by ordinance deny or grant the franchise on the terms and conditions specified in the resolution. No ordinance granting a franchise shall be adopted as an emergency ordinance.

### **7.03.Definitions:**

Unless the provision or the context otherwise requires, as used in this Charter:

A."Shall" is mandatory and "may" is permissive.

B."City" is the City of Folsom and "department," "commission," "agency," "officer," or "employee" is a department, commission, agency, officer, or employee, as the case may be, of the City of Folsom.

C."Council" is the City Council of the City of Folsom.

D."Councilmember" is a member of the City Council.

E."Law" includes ordinance.

F."State" is the State of California.

G."Voter" shall be as defined by state law.

### **7.04.Violations:**

The provisions of this Charter or of any ordinance of the City shall be enforced by any method or procedure provided for by ordinance of the City.

The sanction for a violation of the provisions of this Charter or of any ordinance of the City shall be established by ordinance. (Added by a vote of the people, March 26, 1996 election).

### **7.05.American Bridge Crossing Site:**

The first bridge constructed across the American River within the City limits of the City of Folsom shall be a bridge which connects Folsom Boulevard and Folsom Auburn Road, which bridge shall contain not more than four (4) vehicular traffic lanes and, if deemed necessary by the City Council, may provide for bicycle and pedestrian lanes and space for rail transit. Such newly constructed bridge shall not be a beltway. (Added by vote of the people, Res. 4532, 1994).

### **7.07.Meter Retrofits and Metered Rates:**

A.Mandatory water meter retrofits either partially or wholly paid for by citizens are prohibited in the City of Folsom on single family residences existing prior to 1992. This provision does not in any way conflict with the provisions of Chapter 407 of Stats 1991, as codified within the California Water Code at Chapter 11, Section 110, and Chapter 8 commencing with Section 500.

B.The City shall establish a water rate which differentiates between pre-1914 water right costs and water supplied by contract with the Southern California Water Company (SoCal) and the federal water contract (Public Law 101-514, Section 206 or the "Fazio water"). Unmetered single family residences existing prior to 1992 shall be entitled to a flat rate of the City of Folsom's pre-1914 water right or a tiered rate with a high base line for pre-1992 residences, whichever is less. The rate for metered residences supplied by other contractors (SoCal and Fazio water) shall include the actual cost of the water, including treatment. All single family residences in Folsom except those served by the San Juan Water District may be charged for a prorated share of capital improvements and Water Forum obligations such as the acquisition of an alternative water supply during a period of drought. (Added by vote of the people, Res. 6902, 2002).

### **7.08.Local Control of Land South of Highway 50:**

The City Council shall take the following actions prior to the approval by the Local Agency Formation Commission of the annexation of any of the land bounded by Highway 50, White Rock Road, Prairie City Road and the El Dorado County Line, hereafter referred to as "the Area."

A.Water Supply. Identify and secure the source of water supply(ies) to serve the Area. This new water supply shall not cause a reduction in the water supplies designated to serve existing water users north of Highway 50 and the new water supply shall not be paid for by Folsom residents north of Highway 50.

B.Transportation. Adoption of an infrastructure funding and phasing plan by the City Council providing for the construction

of roadways and transportation improvements that are necessary to mitigate traffic impacts caused by any development of the Area. The infrastructure funding and phasing plan shall identify the timing for construction of all transportation improvements, including any required improvements along the Highway 50 corridor, and the timing of the construction of those improvements shall be tied to the anticipated rate of growth and associated traffic impacts. Folsom residents north of Highway 50 shall not be required to pay fees for the construction of any new transportation improvements required to serve the Area.

C.Open Space. Adoption of a plan by the City Council requiring 30 percent of the Area to be maintained as natural open space to preserve oak woodlands and sensitive habitat areas. Natural open space shall not include active parks sites, residential yard areas, golf courses, parking lots, and their associated landscaping.

D.Schools. Submission of a plan to the Folsom Cordova Unified School District providing for the funding and construction of all necessary school facilities for the Area, so that Folsom residents north of Highway 50 are not required to pay for the construction of new school facilities serving the Area and existing schools are not overcrowded by development in the Area.

E.Development Plan. Adoption of a General Plan Amendment by the City Council to serve as the blueprint for development in the Area. The General Plan Amendment for this Area shall only be adopted after the completion and certification of an Environmental Impact Report. The environmental review shall include an evaluation of cultural, archaeological and prehistoric resources.

F.Public Notice. The General Plan Amendment for the Area shall only be adopted by the City Council after comprehensive public meetings and hearings before the Planning Commission and City Council. Every registered voter in the City shall be mailed a notice of the time, place and date of the public meetings and hearings before the Planning Commission and City Council, along with a summary report on the proposed development plan. Further, the summary of the development plan and a summary of the associated environmental review shall be available for public review in the City Clerk's Office, at all Folsom public libraries, and on the City website.

G.Implementation. All existing City plans, policies, ordinances, and other legislative acts shall be amended as necessary, as soon as possible and in the time and manner required by State law, including the California Environmental Quality Act, to insure consistency between this Charter Amendment and those plans, policies and other provisions. Any plans required to be adopted by the City Council in subsections (A) through (E) of this section shall only be adopted after compliance with the California Environmental Quality Act and upon adoption shall take precedence over any other plans or policies relating to the Area, regardless of the manner, method or time of enactment. (Added by a vote of the people, Nov. 2, 2004 election).

## **ARTICLE VIII. CHARTER AMENDMENT**

### **8.01.Charter Amendment:**

Amendments to this Charter shall be approved by a majority of the voters of the City at a regular election as set by state law, but may be framed and proposed:

A.How Amended. In the manner provided by law by any of:

- 1.Ordnance of the City Council containing the full text of the proposed amendment;
- 2.A report with specific full text as prepared by a duly elected Charter Commission as created pursuant to state law;
- 3.An initiative by the voters of the City.

B.Amendment Election. If a majority of the registered voters of the City voting upon a proposed Charter amendment vote in favor of it, the amendment shall become effective at the time fixed in the amendment, but if no time is therein fixed, at the time the approved amendment is filed with the Secretary of State by the City Clerk and chaptered by the State. The City Clerk shall file the results of a Charter amendment election with the Secretary of State within 45 days following the election.

## **ARTICLE IX. TRANSITION/SEVERABILITY**

### **9.01.Transition/Severability Provision:**

All City ordinances, resolutions, orders and regulations which are in force when this Charter becomes fully effective are repealed to the extent that they are inconsistent or interfere with the effective operation of this Charter or of ordinances adopted pursuant thereto.

A.Inconsistent Acts. To the extent that the constitution and laws of the State of California permit, all laws relating to or affecting this City or its agencies, officers or employees which are in force when this Charter becomes fully effective are superseded to the extent that they are inconsistent or interfere with the effective operation of this Charter or of ordinances or resolutions adopted pursuant thereto.

B.Severability of Provisions. If any provision of this Charter is held to be invalid, the other provisions of the Charter shall not be affected thereby. If the application of the Charter or any of its provisions to any person or circumstance is held invalid, the

application of the Charter and its provisions or circumstances shall not be affected thereby.

### **9.02.Transition of Current Elected Officials:**

At the time of the adoption of this Charter those persons serving in elected office shall continue to serve until the following conditions are met:

A.Councilmembers. Councilmembers shall serve until the end of the term for which they have been elected, and until their successors have been elected and qualified;

B.City Clerk. The City Clerk shall serve until the end of the term for which that officer has been elected, or until the position otherwise is vacated, except the acceptance of an employment agreement as a department head shall act to vacate the elected office of City Clerk;

C.City Treasurer. The City Treasurer shall serve until the end of the term for which that officer has been elected, or until the position otherwise is vacated.

### **9.03.Continuity of Laws, Officers and Employees:**

The City shall continue to own, possess and control all rights and property of every kind and nature owned, possessed or controlled by it on the effective date of this Charter, and shall be subject to all its debts, obligations and liabilities.

A.Continuation of Acts. All lawful ordinances, resolutions, and rules and regulations in force on the effective date of this Charter and not in conflict or inconsistent herewith are continued in force until repealed or amended.

B.Continuation of Officers and Employees. The present officers and employees of the City shall retain their respective offices and employments subject to the provisions of this Charter.

C.Commission Transition. The transition of membership on the Planning Commission and the Parks and Recreation Commission from the method of appointment which existed prior to the adoption of this Charter and that which is established by this Charter shall be as determined by ordinance.

Sections:

- [13.30.010](#) Findings and purpose.
- [13.30.020](#) Definitions.
- [13.30.030](#) Water impact fee.
- [13.30.040](#) Administration of water impact fund.
- [13.30.050](#) Payment of water impact fee.
- [13.30.060](#) Amount of water impact fee.
- [13.30.070](#) Exemptions.
- [13.30.080](#) Annual fee review.
- [13.30.090](#) Inflationary adjustments.
- [13.30.100](#) Adoption in compliance with improvement plan.
- [13.30.110](#) Authorization of credits.
- [13.30.120](#) Amount of credits.
- [13.30.130](#) Procedure for credits.
- [13.30.140](#) Apportionment of credits.
- [13.30.150](#) Criteria for reimbursement.
- [13.30.160](#) Procedure for reimbursement.
- [13.30.170](#) Reimbursement agreements.
- [13.30.180](#) Audit.
- [13.30.190](#) Refund.

**13.30.010 Findings and purpose.**

A. On October 31, 1988, the city council of the city of Folsom approved and adopted its General Plan (the "General Plan") identifying proposed growth within the city limits and further identifying the impacts of such growth upon public facilities within the city including the impacts on water supply and the water supply system.

B. City of Folsom General Plan, Urban Development Policy No. 11.6, Policy on Municipal Services and Facilities states in part that:

[i]t is the policy of the City of Folsom to require new development to bear the cost of its increased demand/effect on municipal services and facilities so as [to] not create a greater burden on existing residents. . . . [i]t is the policy of the City of Folsom to require certain necessary improvements as a part of the development and/or the payment of municipal services and facilities fees consistent with the proportional effect of the development on such services. The City will periodically update its fees to reflect the cost of providing municipal services and facilities.

C. General Plan Policies 40.1, 40.2, 40.5 further provide that it is the city's policy to require new development to pay its fair share of the cost to expand public facilities and services that will be necessary to serve residential, industrial and commercial development.

D. The city of Folsom water master plan dated December 1998 (Water Plan) was adopted by the city council on May 25, 1999 by Resolution No. 6028. The water plan analyzed the city's present and projected water supply and facilities demands, and the costs of water conservation efforts within developed areas of the city.

E. In order to further determine the need for water supplies and facilities created by new residents and businesses and to spread the cost of such facilities among those who create the need for them, the city prepared the water impact fee study dated November 1, 1999. This study, utilizing information contained in the water plan, estimated the amount and type of water supplies and facilities needed to meet the needs created by new development and the cost of such supplies and facilities.

F. Existing water supplies will be inadequate to accommodate the needs generated by projected new residential, industrial and commercial growth in the city and, additional water supplies are needed to protect and promote the health, safety and welfare of Folsom residents and businesses. This finding is based on the water plan, the water impact fee study and on such other information provided to the city council at the public hearing concerning the adoption of the ordinance codified in this chapter. The water plan further provides that an additional supplemental water supply is needed to meet demands in dry years when surface water is limited and/or unavailable.

G. The city intends to enter into a subcontract with the Sacramento County water agency for an additional water supply needed to meet the demands of new residential, industrial and commercial growth (Fazio Water). The Fazio Water is part of the Central Valley Project (CVP) water and has been obtained under Public Law 101- 514 (Section 206). The primary contract and the

subcontract further require that the city install water meters throughout the city.

H. Specific mitigation measures in the Final Environmental Impact Statement/Environmental Impact Report for the CVP Water Supply Contracts Under Public Law 101-514 (Section 206) dated November 1998 (CVP FEIS/EIR) mandate that the city of Folsom and the Sacramento County water agency shall only execute the subcontract for the Fazio Water after the city notifies the agency that funding has been provided for the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting.

I. The city further desires to participate in the regional effort to protect the lower American River, which requires that in critically dry years, the city limit the amount of surface water obtained from the American River and fill the balance of city needs with alternate water supplies.

J. Analysis of the land use expected at buildout of the city pursuant to the General Plan makes it possible to estimate the number of dwelling units to be constructed, the population generated by those dwelling units and the number of persons to be employed by commercial and industrial land users. It is therefore possible to arrive at a fee, based on population and jobs created which equitably spreads the burden of financing water supplies and facilities to those who create the need for such facilities. It is the intent of this chapter to create such a fee, spreading costs of water supplies and facilities to those who create the need for such supplies and facilities, without generating any surplus to the general fund. The purpose of this chapter is to implement the requirements of the General Plan requirements and, under the authority of Article XI, Section 7, of the California Constitution and the authority of Title 7 of the Government Code, to establish the appropriate method of ensuring that sufficient funding for water supply facilities is available to serve residential, industrial and commercial growth in the city.

K. The water impact fee will create a financing mechanism for the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, thereby allowing the city to fulfill the purposes set forth above. In particular, the fee established by this chapter is further necessary in order to assure compliance with the applicable General Plan requirements that new development bear the cost for water supplies and related facilities which is needed to serve such development.

L. The failure to impose the conditions and regulations of this chapter relating to payment of the fee on building permits would jeopardize residents of the community, in that it would permit construction and development to proceed without adequate water supplies and related facilities or means of financing such facilities.

M. The cost estimates set forth in the water impact fee study are reasonable cost estimates for constructing the facilities and providing the water supplies specified therein, and the fees which may be generated by new development will not exceed the total of these construction costs made necessary by such new development. The fee established by this chapter has been calculated in the manner called for in this study in order that the impact upon supplies and facilities is borne by the type of development causing the same.

N. Based upon all evidence and testimony presented, including the water impact fee study, the city council finds that there is a clear and demonstrated relationship between the use of the fee provided for herein, namely the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, and the types of projects upon which the fee is to be imposed, namely new residential, industrial and commercial development. New residential, industrial and commercial development will generate a need for additional water supplies and infrastructure as described in the water impact fee study.

O. Based upon all evidence and testimony presented, including the water impact fee study, the city council finds that there is a reasonable relationship between the need for the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, and the type of development projects upon which the fee is to be imposed, namely new residential, industrial and commercial construction. From careful consideration of the matter, the city council finds that: (1) new development will adversely impact existing water supplies and facilities; (2) will create a need for additional water supplies and related facilities for new development; and (3) the acquisition of water supplies and construction of related facilities set forth in the water impact fee study are appropriate to serve such new development in light of these impacts.

P. Based upon all evidence and testimony presented, including the water impact fee study, the city council finds that there is a reasonable relationship between the amount of the fee as provided for in this chapter and the cost of the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, made necessary by new development. Further, the city council finds that the manner in which the fee is allocated upon each unit of new development is fair and does not exceed the cost of providing facilities generated by the construction of each unit of new development.

Q. The establishment of this water impact fee is exempt from the California Environmental Quality Act ("CEQA") pursuant to CEQA Guidelines Sections 15061(b)(3) and 15273, in that there is no possibility that the establishment of this fee may have a significant effect on the environment, and further because the purpose of establishing this fee is to assist the city in maintaining services within its jurisdictional boundaries. This exemption is specifically based upon the following facts:

1. The environmental impacts of the facilities described in the water impact fee study, including cumulative and growth-

inducing impacts, have been identified in the final environmental impact report (the "EIR") prepared for the 1988 General Plan and certified by the city council in Resolution No. 2522, and in the final Environmental Impact Statement/Environmental Impact Report for the CVP Water Supply Contracts Under Public Law 101-514 (Section 206) dated November 1998 and certified by the city council in Resolution No. 5854.

2.The establishment of this fee will not create a need for additional water supplies and infrastructure, nor is the construction of water supply facilities entirely dependent upon the establishment of this fee.

3.Prior to action on site-specific projects, subsequent environmental review will be undertaken as necessary pursuant to the California Environmental Quality Act.

4.Development already is taking place in the jurisdictional boundaries of the city and additional water supplies will have to be acquired and infrastructure will have to be constructed to accommodate the new population and businesses regardless of whether this fee is established.

5.The establishment of this fee does not commit the city to any definite course of action and does not dictate how funds will be spent, or in any way narrow the field of options and alternatives available to the city.

R.The city council has considered the effect of the fee imposed by this chapter with respect to the housing needs of the city as a whole and of the region, particularly as required by the housing element of the General Plan, and the city council finds that this chapter does not unduly adversely affect the city's ability to provide for such needs.

S.The fee established by this chapter is in addition to any other fees or charges or taxes, required by law or city code or as a condition of development. (Ord. 912 § 1 (part), 1999)

### **13.30.020Definitions.**

The following words are defined for purposes of this chapter as follows:

"Building permit" means the permit issued or required by the city for the construction of any structure pursuant to Title 14 of the Folsom Municipal Code.

"Director" means the public works director.

"Dwelling unit" means a building or part of a building designed for occupancy as a residence by a family.

"Facilities" means the water supplies, improvements, or infrastructure generally identified in the water plan and the water impact fee study, and more specifically determined from time to time by the city council.

"Fee" or "water impact fee" means the fee(s) established by this chapter.

"General Plan" refers to the city of Folsom General Plan adopted by the Folsom city council in 1988, including all subsequent updates and amendments.

"Improvement funds" means these special funds established pursuant to Section 17.92.030.

"Studies" mean the following plans and studies:

- 1.City of Folsom General Plan of 1988; and
- 2.City of Folsom water master plan dated December 1998; and
- 3.City of Folsom water impact fee study dated November 1, 1999. (Ord. 912 § 1 (part), 1999)

### **13.30.030Water impact fee.**

There is established a water impact fee which shall be imposed on the construction of all new commercial, industrial and residential buildings that are to be served with water supplies owned and treated by the city. This fee shall be imposed on all new construction within the city, unless such property is otherwise exempt as provided for in Section [13.30.070](#) of this chapter. The fee established by this chapter is in addition to any other fees or charges or taxes that are required by law or city code as a condition of development. (Ord. 912 § 1 (part), 1999)

### **13.30.040Administration of water impact fund.**

The finance director is directed to establish a special fund entitled the water supply fund. All fees collected pursuant to this chapter shall be deposited in this fund and shall be expended solely to finance the planning, construction, development and acquisition of alternative dry-year water supplies and related facilities, and to finance 10 years of water conservation implementation in the form of water meter retrofitting. (Ord. 912 § 1 (part), 1999)

**13.30.050 Payment of water impact fee.**

Except as otherwise provided by this chapter the fee imposed pursuant to this chapter shall be paid at or prior to the issuance of any building permit for a building subject to this chapter. (Ord. 912 § 1 (part), 1999)

**13.30.060 Amount of water impact fee.**

The water impact fee is established in the rate and amount set forth below for each specified type of construction:

A.	Single-family residential (rate per unit):	\$831.00
B.	Multi-family residential (rate per unit):	447.00
C.	Commercial (rate per acre)	1,119.00
D.	Industrial/office (rate per acre)	1,119.00

(Ord. 912 § 1 (part), 1999)

**13.30.070 Exemptions.**

A. No fee shall be charged for the construction of the following buildings:

1. Buildings under construction for which a valid building permit is in force upon the effective date of the ordinance codified in this chapter unless such building permit contains an express condition requiring the payment of this fee;
2. Construction of buildings within a subdivision subject to a development agreement entered into between the developer and the city under Government Code Section 65864 et seq., which agreement is in full force and effect and expressly prohibits the imposition of additional fees pertaining to water supply costs and facilities, unless amended;
3. Construction of buildings within a subdivision subject to a vested tentative subdivision map under Government Code Section 66498.1 which prohibits the imposition of the fee imposed by this chapter;
4. Additions or modifications to residential buildings;
5. Buildings that will receive water treated by an entity other than the city of Folsom.

B. If any building in existence at the time of the adoption of the ordinance codified in this chapter is destroyed by fire, explosion, act of God or act of public enemy to the extent of more than 1/2 the value thereof, any rebuilding after the date of such destruction shall not be subject to the fee imposed by the chapter provided the area of such building is not increased by more than 10 percent. For the purposes of this chapter, the value shall be determined by the city building inspector based upon the cost of replacement.

C. Additions to existing commercial or industrial buildings shall be subject to the fee established by the chapter. (Ord. 912 § 1 (part), 1999)

**13.30.080 Annual fee review.**

A. On or about January 1 of each year, commencing in 2001, the city council shall review the estimated cost of and the continued need for additional water supplies and facilities as set forth in the water impact fee study, and the relationship between such need and the impacts of the various types of development pending or anticipated for which this fee is charged. Such review shall consider input from city staff and any other public input before determining whether an adjustment in the current water impact fee is appropriate for the subsequent calendar year. The city may also consider the recommendation of a committee composed of representatives of the city and developers in the community.

B. The city council recognizes that the city may receive additional funding for the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, identified in the water impact fee study. To the extent the city receives such additional funding, staff shall present a report to the city council within 60 days of the receipt of such funding identifying: (1) the amount of such funding; and (2) whether such funding has resulted in a net increase in the available funds for the acquisition of alternative dry-year water supplies and for 10 years of water conservation implementation in the form of water meter retrofitting, identified in the water impact fee study. In the event that there is a net increase, the city council shall thereafter determine an appropriate credit against the water impact fee for new development and the fee shall be adjusted in that amount. (Ord. 912 § 1 (part), 1999)

**13.30.090 Inflationary adjustments.**

The fee established by this chapter shall automatically be adjusted on July 1st of each year by a percentage equal to the



change in construction costs since the prior fiscal year as determined by the director based upon Engineering News Record (or similar publication) construction cost index. The determination shall be reported in writing to the city council by the director on or about June 30th of each year or as soon as the information is available. (Ord. 912 § 1 (part), 1999)

#### **13.30.100 Adoption in compliance with improvement plan.**

When the monies in the water impact fund are disbursed for use, the fees shall be used only to finance the planning, construction, development and acquisition of alternative dry-year water supplies and related facilities, and to finance 10 years of water conservation implementation in the form of water meter retrofitting. (Ord. 912 § 1 (part), 1999)

#### **13.30.110 Authorization of credits.**

Whenever a person constructs facilities authorized by this chapter, in accordance with improvement plans approved by the Director, then such person may be entitled to a credit against any fees or charges due pursuant to Chapter [13.30](#) of this code, subject to the provisions of this chapter. (Ord. 912 § 1 (part), 1999)

#### **13.30.120 Amount of credits.**

Unless otherwise set forth in this chapter, the amount of credits authorized for the construction of facilities shall be determined by the Director based on recent competitive bids, but shall not exceed the actual cost of construction. (Ord. 912 § 1 (part), 1999)

#### **13.30.130 Procedure for credits.**

A. Any person desiring credits for the construction of facilities shall, prior to approval of improvement plans for the facilities, execute an agreement with the city authorizing credits. Agreements for credits in an amount of \$25,000 or greater must be approved by the city council. Agreements for credits in an amount less than \$25,000 may be approved by the city manager or his/her designee.

B. Tentative credits shall be allocated prior to the acceptance of facilities, so that they may be subtracted from fees at the time fees are paid. Credits shall be adjusted as necessary at the time the facilities are accepted by the city. The person receiving tentative credits shall agree that if the facilities are not accepted by the city, all tentative credits allocated shall be reimbursed to the city within 60 days of notice of non-acceptance of the facilities. The person receiving tentative credits shall further agree that if tentative credits allocated exceed the final credits, the excess amount shall be reimbursed to the city within 60 days of notice of such amount. (Ord. 912 § 1 (part), 1999)

#### **13.30.140 Apportionment of credits.**

A. Except as set forth in this section, credits shall only be applied against fees and charges due as a result of new construction within the subdivision for which the construction of facilities was required or authorized, and credits shall be equally apportioned to all lots within the subdivision. Credit agreements may not otherwise be assigned without the consent of the city council.

B. Credits may only be apportioned to parcels not within the subdivision if within 30 days from the date that credits are authorized the director determines:

1. The parcel or parcels on which credit is sought are contiguous holdings of an individual or firm at the time construction of facilities is begun;
2. Only credits in excess of the amount of the fees which would have been due on such subdivision or parcel and each subsequent unit thereof within such contiguous holding may be apportioned to other contiguous parcels;
3. The parcel or parcels to which such credits are to be apportioned must be served by the facilities for which credits are authorized;
4. An agreement has been executed between the owner of the contiguous parcels and the city establishing the amount to be credited to each parcel prior to improvement plan approval for the initial parcel.

C. When credits are apportioned, the credit amounts shall be based on the rates in effect on the date improvement plans are approved for the parcel to which credits have been apportioned. (Ord. 912 § 1 (part), 1999)

#### **13.30.150 Criteria for reimbursement.**

Except where specifically excluded, whenever credits are authorized for the construction of facilities pursuant to Chapter [13.30](#), and the credit amount exceeds the amount of the fees due pursuant to Chapter [13.30](#), the city shall reimburse the person entitled to such credits in accordance with the provisions of this chapter. (Ord. 912 § 1 (part), 1999)

#### **13.30.160 Procedure for reimbursement.**

Excess credits shall only be reimbursed pursuant to the terms of a reimbursement agreement executed by the city and the person entitled to such credits. (Ord. 912 § 1 (part), 1999)

### **13.30.170 Reimbursement agreements.**

A. The reimbursement agreement shall include the following terms and conditions:

1. The amount of excess credit to be reimbursed;
2. The schedule for such reimbursement. Such schedule shall not exceed 5 years from the date of acceptance of the facilities by the city, unless funds are not available, as determined by the finance director. If funds are not available when reimbursement is due, payment shall be postponed to the following year;
3. Reimbursement of excess credits of \$10,000 or less shall be made within 45 days of the acceptance of the facilities by the city;
4. No prepayment penalties are allowed;
5. Interest on the unpaid balance shall be paid annually in December at the net city treasury pool rate for the prior fiscal year. Interest shall not begin to accrue, however, until 90 days after the facilities are accepted by the city;
6. The reimbursement agreement may only be assigned by a written amendment to the agreement executed by the finance director, the assignor(s) and the assignee(s);
7. Notwithstanding any provisions to the contrary, excess credit shall not be reimbursed unless and until the facilities are accepted by the city;
8. Notwithstanding any provisions to the contrary, excess credits shall not be reimbursed until all fees and charges required by Chapter [13.30](#) have been paid for all parcels on which credit is sought and for all contiguous lots, parcels or real property owned by or recorded as the property of the same person at the time construction of facilities is begun.

B. Except as authorized by this section, reimbursement agreements must be approved by the city council. If the city council has previously approved a credit agreement with a party, the city manager may approve a reimbursement agreement with the same party if the amount of the reimbursement does not vary from the amount of the credit agreement by more than 10 percent. Reimbursement agreements for amounts less than \$25,000 may be approved by the city manager or his/her designee. (Ord. 912 § 1 (part), 1999)

### **13.30.180 Audit.**

Whenever an audit is requested to determine whether a fee or charge levied by the city exceeds the amount reasonably necessary to cover the cost of any product or service provided, the city manager shall estimate the cost of the audit and require a deposit in the full amount estimated. If the actual cost is less than estimated, the difference shall be refunded to the person requesting the audit. If the actual amount is greater than the deposit, the person requesting the audit shall pay the full cost and the difference shall be due and payable upon notice to the person requesting the audit. This shall apply to any audit requested pursuant to Government Code sections 54985, 66023, and any other authority for an audit of the city's fee program. (Ord. 912 § 1 (part), 1999)

### **13.30.190 Refund.**

A. If 5 years after collection any portion of a fee collected pursuant to this chapter is unexpended or uncommitted, the city shall review the fee and the purpose for which it was charged, and make a determination and finding as to the continued need for the fee and the reasonable relationship between the fee and the purpose for which it is intended. This review and findings shall be made once each fiscal year in any year that there are unexpended or uncommitted fees, beginning with the 5th year after the effective date of this chapter.

B. If the appropriate finding cannot be made, the city shall cause the fees to be refunded to the then current owner of record of the project on which the fee was imposed pursuant to Government Code Sections 66001(d) and 66001(e). (Ord. 912 § 1 (part), 1999)

**ATTACHMENT C**

**District Rate Structure**



<b>Monthly Residential Flat Rate</b>		<b><i>Monthly Non Residential:</i></b> <b>Metered and based on Consumption</b>	
Single Family Residential	\$33.55	3/4" meter	\$14.10
Single Family - Low Income	\$19.70	1" meter	\$22.80
Manufactured Home	\$14.40	1 1/2" meter	\$44.70
Manufactured Home - Low Income	\$9.00	2" meter	\$71.50
Additional Residences	\$18.50	3" meter	\$132.60
Additional Lot	\$7.50	4" meter	\$220.40
Swimming Pool with Filter	\$4.20	6" meter	\$439.60
		8" meter	\$703.10
			\$1,010.9
East Area Water Surcharge	\$12.00	10" meter	0
		Uniform Commodity Rate/ccf	\$0.953
		East Area Water Surcharge/ccf	\$0.48
<b>Ashland Area Monthly Residential Metered Rate</b>			
Single Family Residential	\$23.50		
Single Family - Low Income	\$14.80		
Manufactured Home	\$ 10.70		
Manufactured Home - Low Income	6.70		
Additional Residences	\$13.80		
Additional Lot	\$5.60		
Swimming Pool with Filter	\$3.10		
Uniform Commodity Rate/cc (above 20 ccf)	\$1.18		

**ATTACHMENT D**

**District Sample Bills**



CITY OF FOLSOM  
SERVICE BILL  
50 NATOMA STREET  
FOLSOM, CALIFORNIA 95630  
billingwebmail@folsom.ca.us

## RETURN SERVICE REQUESTED

\*\*AUTO\*\*SCH 5-DIGIT 95630 2 PS5 63941RA02-A-1  
382 1 AV 0.335



## SPECIAL MESSAGES...

### \*Take pART in the ARTS!

Donate on your bill below to support our Art's and Cultural program.

### Christmas Tree Recycling

The Public Works/Utilities Department will be providing a Christmas Tree recycling drop-off location on Saturday, Jan. 8th and Sunday, Jan. 9th from 10:00 a.m. to 4:00 p.m. at Rodeo Park (at the end of Stafford Street). Please remove all lights, ornaments, tinsel, tree stands, and nails prior to dropping off your tree. Boy scouts volunteering at the event will be accepting donations.

To pay by Visa or Mastercard please access  
[www.folsom.ca.us](http://www.folsom.ca.us), Online Services, Service Billing

## PAYMENT COUPON

PLEASE RETURN THIS PORTION ALONG WITH YOUR PAYMENT  
PLEASE MAKE YOUR CHECK PAYABLE TO: CITY OF FOLSOM

Cycle / Route 07-56

Service Address

Billing Address

## ACCOUNT INFORMATION

Statement Date 12/02/2010  
Statement Period 12/01/10 To 12/31/10  
Account Number  
Service Address

[www.Folsom.ca.us](http://www.Folsom.ca.us)

Email: [billingwebmail@folsom.ca.us](mailto:billingwebmail@folsom.ca.us)

## YOUR MONTHLY WATER USAGE

**NO DATA AVAILABLE**

## BANK ACCOUNT DRAFTED FOR

WATER-RESIDENTIAL	33.55
SEWER - CITY RESDNTL	16.15
SOLID WASTE 90 GAL	25.50
RECYCLE 90 GAL	0.00
GREEN WASTE 90 GAL	0.00
SRCSO-COUNTY SEWER	20.00

**TOTAL CURRENT CHARGES \$95.20**

Due Date: 12/25/2010  
Previous Balance 95.20  
Payments -95.20  
Adjustments 0.00

**BANK ACCOUNT DRAFTED FOR: 95.20**

Account Number:

Statement Period: 12/01/10 To 12/31/10

Due Date: 12/25/2010

**BANK ACCOUNT DRAFTED FOR: 95.20**

**\*Yes, I'll take pART! My Donation:**

**TOTAL AMOUNT PAID \$**

CITY OF FOLSOM  
PO BOX 7463  
SAN FRANCISCO CA 94120-7463



000021401000089778000000095208



**CITY OF FOLSOM**  
**SERVICE BILL**  
 50 NATOMA STREET  
 FOLSOM, CALIFORNIA 95630  
 billingwebmail@folsom.ca.us

**RETURN SERVICE REQUESTED**

\*\*AUT0\*\*SCH 5-DIGIT 95630 1 PSS 63941RA02-A-1  
 2 1 AV 0.335



### WATER METER READING

METER SERVICE FROM: 10/07/2010 TO: 11/08/2010

Meter - Units	Previous Reading	Current Reading	Consumption
46510356 - CCF	1333	1369	36.00

### SPECIAL MESSAGES...

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To pay by Visa or Mastercard please access  
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## PAYMENT COUPON

PLEASE RETURN THIS PORTION ALONG WITH YOUR PAYMENT  
 PLEASE MAKE YOUR CHECK PAYABLE TO: CITY OF FOLSOM

Cycle / Route 01-20

Service Address

Billing Address

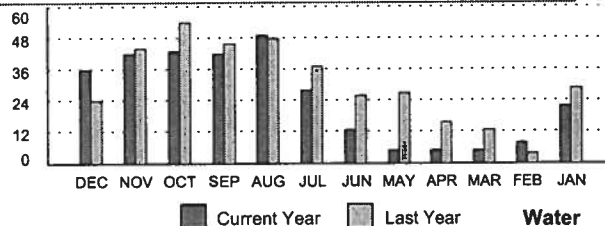
### ACCOUNT INFORMATION

Statement Date 12/02/2010  
 Statement Period 12/01/10 To 12/31/10  
 Account Number  
 Service Address

[www.Folsom.ca.us](http://www.Folsom.ca.us)

Email: billingwebmail@folsom.ca.us

### YOUR MONTHLY WATER USAGE



### ACCOUNT CHARGES DUE

WATER BASE-RESIDENTL	23.50
WATER USAGE	14.08
SEWER - RESIDENTIAL	16.15
SOLID WASTE 90 GAL	25.50
RECYCLE 90 GAL	0.00
GREEN WASTE 90 GAL	0.00
SRCSD-COUNTY SEWER	20.00

**TOTAL CURRENT CHARGES \$99.23**

Due Date: 12/25/2010  
 Previous Balance 209.90  
 Payments -209.90  
 Adjustments 0.00

**TOTAL AMOUNT DUE: 99.23**

Account Number:

Statement Period: 12/01/10 To 12/31/10

Due Date: 12/25/2010

**TOTAL AMOUNT DUE: 99.23**

**\*Yes, I'll take pART! My Donation: \_\_\_\_\_**

**TOTAL AMOUNT PAID \$ \_\_\_\_\_**

CITY OF FOLSOM  
 PO BOX 7463  
 SAN FRANCISCO CA 94120-7463



000001797000135768000000099230



**CITY OF FOLSOM**  
**SERVICE BILL**  
 50 NATOMA STREET  
 FOLSOM, CALIFORNIA 95630  
 billingwebmail@folsom.ca.us

**CITY OF FOLSOM**  
 DISTRICT OF NO. 100

## RETURN SERVICE REQUESTED

\*\*\*AUTO\*\*MIXED AADC 913 12 MAAD 63939RAD1-A-1  
 3006 1 MB 0.382



## WATER METER READING

METER SERVICE FROM: 09/10/2010 TO: 10/08/2010

Meter - Units	Previous Reading	Current Reading	Consumption
59162310 - CCF	2109	2127	18.00

## SPECIAL MESSAGES...

### \*Take pART in the ARTS!

Contribute on your bill to Folsom's Arts & Cultural Commission.

This will be used for services: education/outreach programs, exhibitions/special performances, grant funding for ART in our schools~new ART Center~& more!

Call 355-7285 for FREE Directory

\*\*\*\*\*WE NOW ACCEPT AMERICAN EXPRESS AS A METHOD OF PAYMENT\*\*\*\*\*

To pay by Visa or Mastercard please access  
[www.folsom.ca.us](http://www.folsom.ca.us), Online Services, Service Billing

## PAYMENT COUPON

PLEASE RETURN THIS PORTION ALONG WITH YOUR PAYMENT  
 PLEASE MAKE YOUR CHECK PAYABLE TO: CITY OF FOLSOM

Cycle / Route 05-14

Service Address

Billing Address

FRANCISCO, CA 94120-7463

10

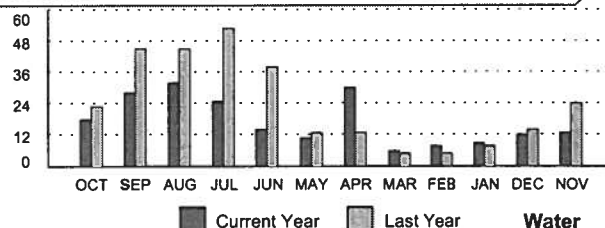
## ACCOUNT INFORMATION

Statement Date 10/30/2010  
 Statement Period 10/01/10 To 10/31/10  
 Account Number  
 Service Address

[www.Folsom.ca.us](http://www.Folsom.ca.us)

Email: [billingwebmail@folsom.ca.us](mailto:billingwebmail@folsom.ca.us)

## YOUR MONTHLY WATER USAGE



## ACCOUNT CHARGES DUE

WATER BASE	22.80
WATER USAGE	17.10
SEWER - MULTI FAMILY	16.15
SOLID WASTE 60 GAL	22.50
RECYCLE 90 GAL	0.00
GREEN WASTE 90 GAL	0.00
SRCSD-MULTIFAMILY	15.00

**TOTAL CURRENT CHARGES \$93.55**

Due Date: 11/22/2010  
 Previous Balance 209.90  
 Payments -106.85  
 Adjustments 0.00

**TOTAL AMOUNT DUE: 196.60**

Account Number:

Statement Period: 10/01/10 To 10/31/10

Due Date: 11/22/2010

**TOTAL AMOUNT DUE: 196.60**

**\*Yes, I'll take pART! My Donation: \_\_\_\_\_**

**TOTAL AMOUNT PAID \$ \_\_\_\_\_**

CITY OF FOLSOM  
 PO BOX 7463  
 SAN FRANCISCO CA 94120-7463



000070421000219748000000196606





**CITY OF FOLSOM**  
**SERVICE BILL**  
 50 NATOMA STREET  
 FOLSOM, CALIFORNIA 95630  
 billingwebmail@folsom.ca.us

**RETURN SERVICE REQUESTED**

\*\*AUT0\*\*SCH 5-DIGIT 95630 1 PSS 63941RA02-A-1  
 3 1 AV 0.335



### WATER METER READING

METER SERVICE FROM: 10/08/2010 TO: 11/10/2010

Meter - Units	Previous Reading	Current Reading	Consumption
70637064 - CF	208	272	0.00

### SPECIAL MESSAGES...

**\*Take pART in the ARTS!**

Donate on your bill below to support our Art's and Cultural program.

#### Christmas Tree Recycling

The Public Works/Utilities Department will be providing a Christmas Tree recycling drop-off location on Saturday, Jan. 8th and Sunday, Jan. 9th from 10:00 a.m. to 4:00 p.m. at Rodeo Park (at the end of Stafford Street). Please remove all lights, ornaments, tinsel, tree stands, and nails prior to dropping off your tree. Boy scouts volunteering at the event will be accepting donations.

To pay by Visa or Mastercard please access  
[www.folsom.ca.us](http://www.folsom.ca.us), Online Services, Service Billing

## PAYMENT COUPON

PLEASE RETURN THIS PORTION ALONG WITH YOUR PAYMENT  
 PLEASE MAKE YOUR CHECK PAYABLE TO: CITY OF FOLSOM

Cycle / Route 03-02

Service Address

Billing Address

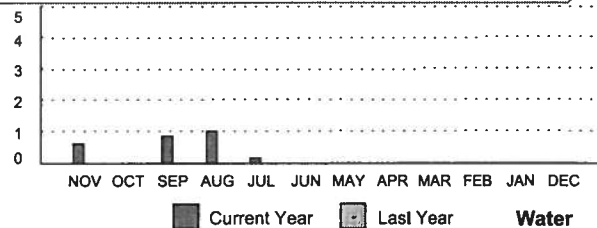
### ACCOUNT INFORMATION

Statement Date 12/02/2010  
 Statement Period 11/01/10 To 11/30/10  
 Account Number  
 Service Address

[www.Folsom.ca.us](http://www.Folsom.ca.us)

Email: [billingwebmail@folsom.ca.us](mailto:billingwebmail@folsom.ca.us)

### YOUR MONTHLY WATER USAGE



### ACCOUNT CHARGES DUE

WATER BASE	10.70
WATER USAGE	0.61

**TOTAL CURRENT CHARGES \$11.31**

Due Date: 12/25/2010

Previous Balance 22.25

Payments -22.25

Adjustments 0.00

**TOTAL AMOUNT DUE: 11.31**

Account Number: .....

Statement Period: 11/01/10 To 11/30/10

Due Date: 12/25/2010

**TOTAL AMOUNT DUE: 11.31**

**\*Yes, I'll take pART! My Donation: \_\_\_\_\_**

**TOTAL AMOUNT PAID \$ \_\_\_\_\_**

CITY OF FOLSOM  
 PO BOX 7463  
 SAN FRANCISCO CA 94120-7463



000001961000006038000000011319

**ATTACHMENT E**

**District Water Shortage Plan**

## **ORDINANCE NO. 1118**

### **ORDINANCE OF THE CITY OF FOLSOM REPEALING AND REPLACING CHAPTER 13.26 OF TITLE 13 OF THE FOLSOM MUNICIPAL CODE CONCERNING WATER CONSERVATION**

THE CITY COUNCIL OF THE CITY OF FOLSOM DOES ORDAIN AS FOLLOWS:

#### **SECTION 1 PURPOSE AND INTENT**

The purpose of this ordinance is to repeal and re-enact Chapter 13.26 of Title 13, and to repeal section 3.20.120 of the Folsom Municipal Code (the "code") pertaining to Water Conservation. Water is a precious resource and sustainable water use practices are needed for normal, dry, and drought years. Chapter 13.26 will align the Code requirements with current and future water conservation requirements and efforts that will enable the City to achieve the required conservation levels dictated by the availability of water.

#### **SECTION 2 REPEAL AND RE-ENACTMENT**

Chapter 13.26 of the Folsom Municipal Code is repealed and re-enacted to read as follows:

Chapter 13.26

#### **WATER CONSERVATION**

Sections:

13.26.005	Definitions
13.26.010	Application
13.26.020	City Responsibility
13.26.030	Water Conservation Program and Landscape Guidelines
13.26.040	Base Allocation of Water
13.26.050	Wasteful Use of Water
13.26.060	Determination of Water Conservation Stage
13.26.070	Water Conservation Stages
13.26.080	Water Use Restrictions
13.26.090	Construction Water
13.26.100	Sustainable Landscaping
13.26.110	Irrigation System Inspection
13.26.120	Discontinuance of Water Service
13.26.130	Unauthorized Water Use
13.26.140	Cross Connection Control Requirements
13.26.150	Violation Declared a Nuisance
13.26.160	Enforcement
13.26.170	Penalties
13.26.180	Remedies Cumulative
13.26.190	Variances

13.26.200 Fire and Other Emergencies

13.26.05 Definitions

A. **"Base Allocation"** means the amount of water allocated to each customer class for both interior and exterior use on a monthly or billing cycle basis.

B. **"Best Management Practice"** (BMP) means a policy, program, practice, rule, regulation ordinance or the use of devices, equipment or facilities that result in more efficient use or conservation of water.

C. **"Certified Landscape Irrigation Auditor"** means a person certified to perform landscape irrigation audits by a professional trade organization or other educational organization.

D. **"CDPH"** means the California Department of Public Health.

E. **"City"** means the City of Folsom.

F. **"City Manager"** means the City of Manager of the City of Folsom or his or her designee unless otherwise stated or indicated by context.

G. **"City water system"** means those facilities within and without the City of Folsom that the City uses to deliver water as the water purveyor recognized by the California Department of Public Health.

H. **"Customer"** means any person or entity using water supplied by the City water system. "Customer" includes tenants of single family dwellings or duplexes, owners of real property and management companies responsible for property management of real property.

I. **"CUWCC"** means the California Urban Water Conservation Council.

J. **"Department"** means the City of Folsom, Utilities Department.

K. **"Director"** means the City of Folsom Director of Utilities or his or her designee unless otherwise stated or indicated by context.

L. **"Discontinued Service"** means having the water service turned off by the Department.

M. **"Fire Chief"** means the Fire Chief of the City of Folsom, or designee unless otherwise stated or indicated by context.

N. **"Irrigation Service"** means a water service that is exclusively for landscape irrigation purposes.

O. **"Non-residential customer"** means a customer of the City water system on whose property a residence is not situated.

P. **“Person”** means any person, business, firm, partnership, association, corporation, company or organization of any kind.

Q. **“Private Fire Service”** means a private fire service main and appurtenances installed in accordance with NFPA 24 on private property and maintained by the property owner for the explicit intent of providing fire flows either through fire hydrants, fire sprinkler systems, or other water-based fire protection systems.

R. **“Residential customer”** means a customer of the City water system on whose property, whether owned or rented, at least one person resides.

S. **“Sustainable Landscaping Practice”** means the use of best management practices in the planning and maintenance of water efficient landscaping, as discussed in Section 13.26.100 Sustainable Landscaping.

T. **“Water conservation”** means the best management practices for the reasonable and efficient use of water for both indoor and outdoor water demands.

U. **“Water Conservation Program Guidelines”** means the program guidelines developed, maintained, and managed by the Director pursuant to this chapter.

V. **“Water Management Coordinator”** means the Water Management Coordinator in the Utilities Department.

W. **“Wasteful use of water”** is as defined in Section 13.26.050.

#### 13.26.010 Application

The provisions of this ordinance shall apply to all customers of the City water system.

#### 13.26.020 City responsibility

The City, and its duly authorized agents, servants and employees, shall have the exclusive right to deliver water within the City’s water service area. The city shall also have the right to manage water demand within the City’s water service area.

#### 13.26.030 Water Conservation Program and Landscape Guidelines

A. The Director is authorized to develop sustainable landscape practices consistent with the water conservation intent of this chapter, CUWCC best management practices and any applicable laws. The sustainable landscape practices shall be included as a condition of approval for any development project with new or rehabilitated landscaping for which the City has discretionary approval authority where such landscape area is greater than 2,500 square feet or as otherwise determined by the Director to achieve the City’s water conservation goals.

B. The Director shall oversee this chapter's implementation, compliance with the CUWCC best management practices and any laws mandating water conservation. The Director shall, from time to time, but at least annually, review the sustainable landscape practices and determine if such practices are reasonable and achieve the level of conservation required under this chapter for the declared Water Conservation Stage, taking into account the burden imposed on property owners.

#### 13.26.040 Base Allocation of Water

The Director may develop a base allocation for each class of customer account taking into account the needs and characteristics of each customer class. This base allocation may be used to evaluate compliance with the conservation stage in effect and to encourage the reasonable and efficient use of water.

#### 13.26.050 Wasteful Use of Water

Any of the following acts or omissions, whether intentional, unintentional, willful or negligent, shall constitute the wasteful use of water:

- A. Water flowing away from a property caused by excessive application(s) of water beyond reasonable or practical irrigation rates, duration of application, or other than incidental applications to impervious surfaces.
- B. Causing or permitting an amount of water to discharge, flow, run to waste into or flood any gutter, sanitary sewer, water course or storm drain, or to any adjacent lot, from any tap, hose, faucet, pipe, sprinkler, or nozzle. In the case of irrigation, "discharge," "flow" or "run to waste" means that water is applied to the point that the earth intended to be irrigated has been saturated with water so that additional applied water then flows over the earth. In the case of washing, "discharge," "flow" or "run to waste" means that water in excess of that necessary is applied to wash, wet or clean the dirty or dusty object, such as an automobile, sidewalk, or parking area.
- C. Allowing water fixtures or heating or cooling devices to leak or discharge water.
- D. Maintaining ponds, waterways, decorative basins or swimming pools without water recirculation devices or with known leaks, both seen and unseen.
- E. Discharging water from, and refilling, swimming pools, decorative basins or ponds in excess of the frequency reasonably necessary to maintain the health, maintenance or structural considerations of the pool, basin or pond, as determined by the Director.
- F. Continued operation of an irrigation system that applies water to an impervious surface or that is in disrepair.
- G. Use of a water hose not equipped with a control nozzle capable of completely shutting off the flow of water except when positive pressure is applied.

- H. Irrigation of lawns or landscaping when it is raining.
- I. Overfilling of any pond, pool or fountain which results in water discharging from the pond, pool or fountain.
- J. Failure to repair customer pipes, faulty sprinklers or other water-related fixtures that leak water, within five working days, unless the Director informs the customer that the leak must be repaired more quickly, in which case the customer shall repair the leak in the time specified by the Director.
- K. Irrigating lawns or landscaping between the hours of 10:00 a.m. and 10:00 p.m., with the exception of drip irrigation as otherwise authorized pursuant to this chapter, unless a variance is granted by the Director.
- L. Using potable water from the City water system for compaction, dust control or other construction purposes without first obtaining approval from the Director as provided in Section 13.26.090 and a meter from the City.
- M. Installing a single-pass cooling system, such as water cooled air compressor, in any property that is newly connected to the City water system. This does not apply to evaporative cooling systems.
- N. Installing a non-recirculating system in any new automatic car wash or new commercial laundry system or failure to utilize current best management practices for water conservation that are industry standards.

#### 13.26.060 Determination of Water Conservation Stages

In determining the City water system's water conservation stage, the City Manager shall determine whether that system's water supplies available for potable use are sufficient to meet the current customer demands on that system and shall consider, unless otherwise excluded by this section, all relevant factors. The City Manager shall consider, among other things: (a) any variations in the reliability of the water supplies available to the City water system; (b) any declarations by the Bureau of Reclamation concerning its ability to deliver water under Central Valley Project water-service contracts; (c) availability of non-potable water to meet non-potable demands on the City water system; (d) the success, or lack thereof, of previous declarations of a less stringent water conservation stage in causing the water-use reductions sought by the City; and (e) any agreements between the City and local water purveyors for deliveries of additional water supplies to the City. The City Manager will select the necessary stage for conservation under Section 13.26.070.

#### 13.26.070 Water Conservation Stages

The City Manager is authorized to implement and enforce whatever conservation measures are deemed necessary to achieve the water reduction requirements of the declared conservation stage. For each stage, the water use reduction for customers shall be as follows:

A. Stage one ("Basic Stage") shall be in effect at all times unless the City Manager determines that a more restrictive conservation stage is appropriate. Base allocation of water may be used to determine allowable water use for each customer in this stage and compliance with the following conservation stages.

B. Stage two ("Water Alert") shall achieve a reduction of up to 12% relative to the base allocation of water.

C. Stage three ("Water Warning") shall achieve a reduction of up to 20% relative to the base allocation of water.

D. Stage four ("Water Crisis") shall achieve a reduction of up to 35% relative to the base allocation of water.

E. Stage five ("Water Emergency") shall achieve a reduction of up to 50% relative to the base allocation of water, or any other reduction the City Manager determines, in writing, are necessary to protect public health and safety in the City during the actual situation presented by a Stage Five Water Emergency.

#### 13.26.080 Water Use Restrictions

Water use restrictions during the various conservation stages shall, at a minimum, be as listed below and may be augmented by other restrictions as determined necessary by the City Manager.

A. During the Stage One ("Basic Stage") conservation stage, the following restrictions shall be enforced:

1. Water will be used for beneficial uses; all Wasteful Use of Water are prohibited.

2. Water shall be confined to the customer's property and shall not be allowed to run off to adjoining property or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.

3. Free flowing hoses are prohibited for all uses including landscape watering, vehicle and equipment washing, ponds, evaporative coolers and livestock watering troughs. Automatic shut-off devices shall be installed on any hose or filling apparatus in use.

4. All pools, spas and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak proof. Pool draining and refilling shall be allowed only to the extent required for health, maintenance, or structural considerations, and must otherwise comply with all applicable federal, state and local stormwater management requirements, including but not limited to Chapter 8.70 of Folsom Municipal Code, Stormwater Management and Discharge Control.



B. During the Stage Two ("Water Alert") conservation stage, the following restrictions shall be enforced:

1. All Stage One (Basic Stage) restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2. Landscape and pasture irrigation shall be limited to a maximum of 3 days per week based on the following odd-even schedule, with the exception of drip irrigation, which may be conducted on any day.

a. Customers with street addresses that end with an odd number may irrigate only on Tuesdays, Thursdays and Saturdays.

b. Customers with street addresses that end with an even number may irrigate only on Wednesdays, Fridays and Sundays.

c. No irrigation is permitted on Mondays.

3. Hand and manual watering follows the same odd/even day schedule and may be done anytime during the day.

4. Washing of streets, parking lots, driveways, sidewalks, buildings or other hardscape surfaces is prohibited except as necessary for health, sanitation or fire protection purposes.

5. Restaurants shall serve water only upon specific request.

6. Public and private streetscape landscaping (medians and frontage) may be watered only on the same schedule as Customers with street addresses that end with an even number.

C. During the Stage Three ("Water Warning") conservation stage, the following restrictions shall be enforced.

1. All Stage Two restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2. Landscape and pasture irrigation shall be limited to a maximum of 2 day per week based on the following odd-even schedule, with the exception of drip irrigation, which may be conducted on any day.

a. Customers with street addresses that end with an odd number may irrigate only on Tuesdays and Saturdays.

b. Customers with street addresses that end with an even number may irrigate only on Wednesdays and Sundays.

c. No irrigation is permitted on Mondays, Thursdays and Fridays.

d. Irrigation for public parks and other public grounds, including landscaping and lighting district property, shall only be allowed with an irrigation plan and irrigation system audit that has been approved by the Director in accordance with Section 13.26.110, irrespective of size.

3. No water from the City water system shall be used for construction purposes such as dust control, compaction, or trench jetting, unless the use is approved by the Director consistent with the provisions of section 13.26.090.

D. During the Stage Four ("Water Crisis") conservation stage, the following restrictions shall be enforced:

1. All Stage Three restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2. Landscape and pasture irrigation, including drip irrigation, shall be limited to a maximum of 1 day per week based on the following odd-even schedule.

a. Customers with street addresses that end with an odd number may irrigate only on Tuesdays.

b. Customers with street addresses that end with an even number may irrigate only on Wednesdays.

c. No irrigation is permitted on Mondays, Thursdays, Fridays, Saturday and Sunday.

3. Public and private streetscape landscaping (medians and frontage) may be watered only on the same schedule as Customers with street addresses that end with an even number.

4. No water from the City water system shall be used to drain and refill swimming pools, artificial lakes, ponds or streams and no new permits for swimming pools, artificial lakes, ponds or streams shall be issued until the water conservation stage has been declared to be Stage One.

5. Water use for ornamental ponds and fountains is prohibited unless required to maintain existing vegetation or to sustain existing fish/animal life.

6. New or expanded landscaping on properties is limited to drought-tolerant trees, shrubs, and ground cover and no new turf or grass shall be planted, hydro-seeded or laid.

7. Washing of automobiles or equipment shall be done on the lawn or at a commercial establishment that uses recycled or reclaimed water.

8. All water leaks shall be repaired within 24 hours of notification by the Utilities Department or service may be discontinued.

E. During the Stage Five ("Water Emergency") conservation stage, the following restrictions shall be enforced.

1. All Stage Four restrictions shall continue to be enforced, except to the extent they are replaced by more restrictive requirements imposed by this section.

2. No Landscape and/or pasture irrigation shall be allowed.

3. Flushing of sewers or fire hydrants is prohibited except in case of an emergency and for essential operations.

4. Flushing of fire protection systems is prohibited except for during required maintenance or servicing of the system.

5. Water use for ornamental ponds and fountains is prohibited.

6. Washing of automobiles or equipment shall be done at a commercial establishment that uses recycled or reclaimed water.

7. Installation of any new lawns or landscaping is prohibited.

8. No water from the City water system shall be used for construction purposes such as dust control, compaction, or trench jetting, unless the use is necessary for fire protection system testing, maintenance, or acceptance by the Fire Chief.

#### 13.26.090 Construction Water

Water for construction purposes obtained from the City's water supply may only be used in the City's water service area. Water for dust control, compaction and other construction activities shall be subject to the following conditions:

A. Use of water from the City water system for construction purposes shall require a City-issued construction water meter and a refundable security deposit that includes a monthly meter rental fee as established by the Department. Prior to such water use, the construction water customer must obtain approval from the Director to use the water for construction and agree to comply with all of the requirements of this chapter. The Director may impose such additional conditions on the use of such water, including, but limited to, conditions regulating the purpose for the use of the water, rate of use, location, frequency and quantity of use, and such other conditions as deemed reasonably necessary by the Director to effectuate the purposes of this chapter. The construction meter shall be located by the Department and shall only be relocated

or removed by the Department. Unauthorized relocation or removal of a construction meter shall be deemed theft and the offender shall be subject to the penalties set forth in Section 13.26.170.

B. Construction water shall only be drawn through a construction water meter. Construction water drawn through an unmetered connection shall be deemed theft of water and shall be grounds for the deposit on the construction meter to be forfeited. The offender shall also be subject to the penalties specified in Section 13.26.170. In the event the person identified as drawing water without a metered connection does not have a meter, the action shall be deemed theft and the offender shall be subject to the penalties specified in Section 13.26.170.

C. These requirements for construction water use may be modified or supplemented by other conservation measures as determined appropriate by the Director for the declared Conservation Stage. The Director may terminate the approval granted to use the construction water based on water use restriction stages, violation of the terms and conditions of use, and/or for conduct that amounts to Wasteful Use of Water.

#### 13.26.100 Sustainable Landscaping

Where this chapter permits or prohibits acts based upon whether or not a planting, tree, shrub, or groundcover is "drought-tolerant" or "sustainable" the determination shall be made based upon: (a) Sunset's "The Western Garden Book" (February 2007), Sunset Books Publishing; (b) Robert Perry, "Trees and Shrubs for Dry California Landscapes;" (c) EBMUD, "Water Wise Gardening;" (d) UC Davis Arboretum's "All Stars" plant database ([www.arboretum.ucdavis.edu](http://www.arboretum.ucdavis.edu)) or as determined by the Director.

#### 13.26.110 Irrigation System Inspections

All customers, public and private, with a parcel over 5 acres and with a separate irrigation service shall conduct an annual irrigation system inspection prior to the start of the irrigation season on April 1. This inspection shall be performed by Certified Landscape Irrigation Auditor or Licensed Landscape or Irrigation Contractor and the results forwarded to the Department in accordance with the procedure outlined in the Water Conservation Program Guidelines. This requirement will be waived for one full year if a full landscape water audit has been performed in the previous year by the Department's Water Management Staff, who are available on a limited basis. Single family residences are exempt unless the Director determines there has been wasteful use of water on a customer's premises and the conditions have not been corrected within five days after the city provides written notification to discontinue such practice.

Customers that have a current irrigation system check-up on file with the Department will be allowed one courtesy water waste warning before being deemed in violation of this chapter.

#### 13.26.120 Discontinuance of Water Service

The Director may discontinue service to a customer's connection to the City water system at the time that the Director issues to the customer: (i) a notice of a third violation of this chapter during the Stage One "Basic Stage", or Stage Two "Water Alert" within two months; (ii) a notice of a second violation of this chapter during a Stage Three "Water Warning" or a Stage Four "Water Crisis" within one month; or (iii) a notice of a second violation during a Stage Five "Water Emergency", irrespective of time. If the customer's water service is discontinued due to violations of this chapter, the customer shall be subject to the penalties specified in Section 13.26.170. Upon seeking renewed service from the City, the customer shall pay the City's Water Turn Off/On Service fee as set by Ordinance or Resolution of the City Council.

#### 13.26.130 Unauthorized Water Use

- A. An illegal connection to the City water system shall either be metered by the property owner within the time specified by the Department or disconnected at the discretion and direction of the Director, and the offender shall be subject to the penalties specified in Section 13.26.170.
- B. Unauthorized use of a fire hydrant, public or private, for anything other than fire flows or permitted and metered construction water shall subject the offender to the penalties specified in Section 13.26.170 and Chapter 8.36 Folsom Fire Code.
- C. Private fire services with an observed demand that is deemed not to be fire flow by the Department, shall have a meter and appropriate cross-connection control device installed by the property owner, upon approval by the Director and the Fire Chief. Prior to making any modifications or alteration to the on-site fire service, a permit shall be obtained from the Fire Department in accordance with Chapter 8.36. Upon written notification of the requirement to install a meter and cross-connection control device, the property owner shall have 30 calendar days to submit a plan of correction to the Director. Failure to comply with this section shall subject the property owner to the penalties specified in Section 13.26.170 Penalties and the service may be disconnected at the discretion of the Director and the Fire Chief.

#### 13.26.140 Cross Connection Control Devices

All connections to the City's water system shall have the appropriate cross-connection control device as required by CDPH regulations and enforced by the Department in accordance with Chapter 13.22 Water System Cross-Connection Control. These devices shall be from the approved and published list maintained by the University Southern California (USC) or other list as approved by the Director and shall be tested annually in accordance with the Department's policies and procedures. Devices used on private fire services shall be listed for fire service use and maintained in accordance with State Fire Marshall regulations.

13.26.150 Violation Declared a Nuisance

Any activity in violation of this chapter will adversely and seriously affect the public health, safety and welfare, is hereby declared to be a public nuisance and may be remedied as provided in this chapter, any other applicable portion of the Folsom Municipal Code or applicable state law.

13.26.160 Enforcement

A. This chapter shall be enforced pursuant to the provisions of Chapter 1.08 to 1.10, inclusive, of Title 1 of the Folsom Municipal Code and any other enforcement mechanism available to the City under the Folsom Municipal Code and/or applicable law.

B. Unless otherwise expressly provided in this chapter, the Director shall enforce the provisions of this chapter.

13.26.170 Penalties

A. The goal of the provisions of this chapter are to achieve voluntary compliance from the customer, and the City will take reasonable measures to assure the customer has information available to promptly and efficiently address water use issues. Where voluntary compliance cannot be achieved through initial contacts and warnings, then appropriate administrative penalties and further action are required. Except as otherwise provided herein, violations of any provision of this chapter shall be addressed as follows:

<b>Violation</b>	<b>Penalty</b>
First	Personal or written notification of the violation.
Second (Within three months of first violation)	Written notification and issuance of a Notice to Correct.
Third (Within six months of first violation)	Issuance of an Administrative Penalty, Mandatory Installation of a Water Meter, Discontinued Water Service and/or other Penalties as provided in the Notice of Violation and as determined by the Utilities Director.

B. Penalties

1. A violation of this chapter shall also be an administrative violation as defined in Section 1.08.020.

2. Each of the sanctions for administrative violations identified in Section 1.09.013 shall be available for enforcement of the provisions of this chapter. Based on the criteria for imposition of administrative sanctions set forth in Section 1.09.014, each day a violation of this

chapter continues it shall be deemed a Level A Violation as that term is described in Section 1.09.012 with an initial penalty of up to one hundred (\$100.00) dollars.

3. In addition to any other penalties provided by this chapter, if a customer of the City water system violates any of the water use restrictions during a stage two, three, four, or five water conservation stage as set forth in section 13.26.080, and such conditions are not corrected within five days after the customer is given written notice, the City is authorized to do any or all of the following:

a. Meter any flat rate service connection and apply the regularly established metered rates. If the parcel has over 2,500 square feet of landscaping a separate landscape meter may be installed. Costs for the water meters and installation shall be paid by the property owner.

b. If the service is metered, the customer shall be billed at twice the metered rate during the time that the violation continues. If more than 2,500 square feet are irrigated and the parcel does not have a separate irrigation meter, then an irrigation meter may be installed. The customer shall be billed at twice the metered rate during the time the violation continues. Costs for the water meter, and for any required cross connection controls and installation, shall be paid by the property owner.

#### C. Appeal

There shall be no appeal of the water use restriction identified in Section 13.26.080 and any appeal of administrative penalties shall follow the request for hearing procedures provided in Chapter 1.09. Any order to install a mandatory water meter, discontinue water service or any other orders or decisions of the Director shall be appealable to the City Manager pursuant to Section 2.08.060, provided, however, that the City Manager's decision shall be final and there shall be no right of appeal to the City Council.

#### 13.26.180 Remedies Cumulative

The remedies set forth in this chapter are cumulative to any other remedy available to the City. Pursuit of one remedy shall not preclude any other remedy, and nothing contained in this chapter shall limit or be deemed to prevent the City from pursuing any other remedy available to the City under the Folsom Municipal Code or other applicable law.

#### 13.26.190 Variances

In unusual circumstances, application of this chapter may cause unnecessary hardships or results inconsistent with this chapter's purposes and intent. Therefore, variances to some of the requirements of this chapter may be appropriate as delineated below.

A. Authority to Grant Variances

The Director may grant variances from this chapter's provisions during a Stage One, Two, or Three conservation stage as specified in Section 13.26.080 Water Use Restrictions. During Stage Four or Five conservation stage as specified in that section, any previously granted variances shall be suspended without notice, unless they are based on a critical health need as determined by a licensed medical professional, with such determination being provided to the Director.

B. Landscape Variances

Applications for landscape variances shall be obtained from, and filed with, the Utilities Department. The Director may grant any such applications in his or her discretion in light of the condition of the water supply for the City water system. Any such variance shall be subject to the conditions presented in the Water Conservation Program and Landscape Guidelines.

C. Other Variances

Customers who seek a variance from this chapter for any reason other than the needs of new landscaping shall submit to the Utilities Department a written request for variance, setting forth, in detail, the extraordinary circumstances that support the application. The Director may approve the application in his or her discretion, provided that the variance allows the applicant to use only the minimum amount of water in addition to that allowed by this chapter that the Director reasonably believes is necessary to satisfy the circumstances that support the application. Any such variance shall terminate one year after its issuance, subject to an application for its renewal.

Section 13.26.200 Fire and Other Emergencies

Nothing in this chapter limits, or may be construed as limiting the availability of water for extinguishing fires, meeting the demands of any other similar emergency, or routine inspection and maintenance of fire hydrants.

**SECTION 3 REPEAL**

Section 3.20.120 of the Folsom Municipal Code is hereby repealed as of the effective date of this Ordinance.

**SECTION 4 SEVERABILITY**

If any section, subsection, clause, phrase, or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it would have adopted this ordinance and each section, subsection, sentence, clause, phrase or portion thereof, irrespective of the fact that any one or more sections, subsections, clauses, phrases or portions be declared invalid and unconstitutional.



## SECTION 5 EFFECTIVE DATE

This ordinance shall become effective thirty (30) days from and after its passage and adoption, providing it is published in full or in summary within twenty (20) days after its adoption in a newspaper of general circulation within the City of Folsom.

This ordinance was introduced at the regular meeting of the City Council on February 10, 2009, and the second reading occurred at the regular meeting of the City Council on February 24, 2009.

On a motion by Council Member Morin, seconded by Council Member Howell the foregoing ordinance was passed and adopted by the City Council of the City of Folsom, State of California, this 24<sup>th</sup> day of February, 2009 by the following vote, to wit:

AYES: Council Member(s): Howell, Morin, Sheldon, Starsky, Miklos

NOES: Council Member(s): None

ABSENT: Council Member(s): None

ABSTAIN: Council Member(s): None

  
\_\_\_\_\_  
Stephen E. Miklos, MAYOR

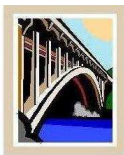
ATTEST:

  
\_\_\_\_\_  
Christa Schmidt, CITY CLERK

Effective: March 26, 2009

**ATTACHMENT F**

**Annual Potable Water Quality Reports**



CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE

## 2009 Consumer Confidence Report May 2010

*Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. (This report contains important information about your drinking water. Translate it, or speak with someone who understands it.)*

### HIGH QUALITY DRINKING WATER IS FOLSOM'S PRIMARY CONCERN

The City of Folsom is committed to providing our customers with high quality drinking water. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (USEPA) and State drinking water health standards. The City of Folsom takes every effort to safeguard its water supply and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard.

The California Department of Public Health (Department) requires that state certified water treatment operators and distribution operators monitor and sample your drinking water from source to tap on an hourly, daily, monthly, quarterly, and annual basis using state-of-the-art equipment and state-certified labs.

### ABOUT THE CONSUMER CONFIDENCE REPORT

The Consumer Confidence Report (CCR) is an annual summary of the results of ongoing tests for contaminants in drinking water. The report is designed to inform you of the quality of your drinking water. Each year, the Department and USEPA require the City of Folsom to compile and distribute a CCR to all of our water customers. The report includes a comparison of the city's water quality to state and federal standards.

### WHERE YOUR WATER COMES FROM

The City of Folsom receives all of its drinking water from Folsom Lake. Water drawn from the lake is piped to the Folsom Water Treatment Plant where it undergoes several treatment processes before it is delivered to our customers.

### YOUR DRINKING WATER – WHAT YOU SHOULD KNOW

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

*Contaminants that may be present in source water include:*

- *Microbial contaminants such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;*

- *Inorganic contaminants such as salts and metals that can be naturally occurring or result from urban storm water runoff and residential uses;*

- *Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.*

- *Organic chemical contaminants including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, or from gas stations, urban storm water runoff, and septic systems; and*

- *Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, USEPA and the Department prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

The City of Folsom conducted lead and copper sampling in July 2008 and found the water supply did not exceed any mandated standards. Copper or lead contamination may occur from the internal corrosion of household plumbing systems or the erosion of natural deposits. Copper contamination may also occur from the leaching from wood preservatives, and lead contamination may also occur from discharges from industrial manufacturers.

Adverse health effects are possible with excess consumption of many water constituents, including lead and copper. Copper may cause gastrointestinal distress or kidney or liver failure with long-term excess exposure. Long-term excess exposure to lead may cause developmental delays in children and kidney problems or high blood pressure in adults.

### INFORMATION ABOUT POTENTIAL SOURCES OF POLLUTION

The Department requires water providers to conduct a source water assessment to help protect the quality of future water supplies. The assessment describes where a water system's drinking water comes from, the types of polluting activities that may threaten source water quality and an evaluation of the water's vulnerability to those threats.

A source water assessment was conducted for the City of Folsom's water supply from Folsom Lake in March 2002. The assessment concluded that the City of Folsom's water source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: Folsom Lake State Recreation Area facilities (marina, restrooms, recreational areas, parking lots, and storm drains) and residential sewer and septic systems. The assessment also concluded that source is most vulnerable to the following activities not associated with any detected contaminants: illegal activities, dumping, fertilizer, pesticide and herbicide application, and high-density housing developments.

A copy of the complete assessment is available at the California Department of Public Health, Sacramento District Office, 1616 Capitol

Avenue, Sacramento, CA. You may request a summary of the assessment be sent to you by contacting Dave Lancaster, Sacramento District Engineer, or James Bridges, Folsom Water Treatment Plant Supervisor, at (916) 355-8339.

### IMPORTANT NOTICE FOR SENSITIVE POPULATIONS

*Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).*

### READING THE WATER QUALITY DATA

1. Identify constituents in the left hand column.
2. Compare detection range to the state (MCL/PHG) standards.
3. Confirm that your water meets state drinking water health standards.

### WATER QUALITY DEFINITIONS

The following definitions are listed to help you understand the information recorded in the water quality chart:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**HAVE QUESTIONS?**

For a complete list of constituents tested or to request additional copies of the Consumer Confidence Report, please contact the Water Quality Division at (916) 355-8338 or email [waterquality@folsom.ca.us](mailto:waterquality@folsom.ca.us). The Consumer Confidence Report is also available at our website at [www.folsom.ca.us](http://www.folsom.ca.us).

**NEED CONSERVATION TIPS?**

For water conservation tips and free supplies, please contact the Conservation Coordinator at (916) 355-7252 or visit our website at [www.folsom.ca.us](http://www.folsom.ca.us).

**GET INVOLVED**

The Folsom City Council meetings are open to the public and are held on the 2<sup>nd</sup> and 4<sup>th</sup> Tuesdays of each month at 6:30 p.m. Meetings are located at City Hall, 50 Natoma Street. Meetings are also broadcast on Metro Cable Channel 14 at 9:00 a.m. on Friday and Saturday of meeting weeks.

The information provided in this water quality chart is required by law to be issued to every water user. Property Owners – Please share this information with your tenants!

City of Folsom 2009 Water Quality Report												
Contaminant	Units	MCL	PHG	Ashland				Folsom				Major Sources in Drinking Water
				Range		Average	Exceeds MCL?	Range		Average	Exceeds MCL?	
				Min	Max			Min	Max			
% Coliform Present		5%( a )	( 0 )						1.6%		No	Naturally present in the environment
Alkalinity	ppm			20	30	24		18	30	23		
Bicarbonate	ppm			20	26	23		<DLR	30	24		
Calcium	ppm			8.5	11	9.1		4.6	6.8	5.4		
Carbonate	ppm			<DLR	6.8	6.8						
Chloride	ppm	500*		3.2	3.7	3.4		5.2	6.0	5.6		Runoff/leaching from natural deposits; seawater influence
Chlorine	ppm	4( b )		0.5	1.3	0.78		0.67	1.3	1.0		Drinking water disinfectant added for treatment
Haloacetic Acids( c )	ppb	60	n/a	16	38	23 ( 24 )	No	7.5	36	20 ( 18 )	No	By-product of drinking water chlorination
Hardness	ppm			27	36	30		18	25	21		
Magnesium	ppm			1.4	2.2	1.8		<DLR	2.2	1.8		
Std												
pH	Units			7.6	8.8	7.9		7.1	7.6	7.4		
Sodium	ppm			1.9	3.9	2.7		4.4	7.1	5.5		
Specific Conductance	mS/cm	1600*		66	93	75		63	80	71		
Sulfate	ppm	500*		6.3	9.4	7.2		1.5	3.1	2.1		Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	ppm	1000*		43	59	48		34	70	44		Runoff/leaching from natural deposits
Total Organic Carbon (effluent)	TT		n/a					0.83	1.2	0.99		Various natural and man-made sources
Total Trihalomethanes( c )	ppb	80	n/a	26	75	43 ( 46 )	No	6.1	42	22 ( 21 )	No	By-product of drinking water chlorination
Turbidity	TT		n/a					0.02	0.19	100%( d )		Soil runoff
* Secondary Maximum Contaminant Level												
( a ) Percentage of coliform samples reported as "present" for coliform per month												
( b ) MRDL												
( c ) Running annual average of monitoring sites given in parantheses												
( d ) Percentage of monthly total of combined filter effluent samples less than 0.3 NTU												

The City of Folsom purchases water for the Ashland water system from San Juan Water District. Ashland is bounded on the north by the Placer County line, on the west by Baldwin Dam Road, and by the American River on the south and east.

**ATTACHMENT G**

**Urban Water Tables 1-8**

Year of Data 2009

**Table 1A - Surface Water Supply for the Ashland Service Area <sup>1</sup>**

***Surface Water Supply***

<b>2009 Month</b>	<b>Federal Urban Water Contract</b>	<b>Federal</b>	<b>Local Water</b>		<b>Other Water</b>	<b>Total</b>
	<b>W1373<sup>2</sup> (acre-feet)</b>	<b>Agric. Water (acre-feet)</b>	<b>State Water (acre-feet)</b>	<b>Contract 152A<sup>3</sup> (acre-feet)</b>	<b>(define) (acre-feet)</b>	
January	8	0	0	45	0	53
February	28	0	0	149	0	177
March	23	0	0	125	0	148
April	17	0	0	92	0	109
May	22	0	0	117	0	139
June	29	0	0	154	0	183
July	32	0	0	173	0	205
August	32	0	0	169	0	201
September	28	0	0	147	0	175
October	18	0	0	97	0	115
November	13	0	0	68	0	81
December	9	0	0	52	0	61
<b>TOTAL</b>	<b>259</b>	<b>0</b>	<b>0</b>	<b>1,388</b>	<b>0</b>	<b>1,647</b>

1. Wholesale water supply agreement between City of Folsom and San Juan Water District for the Ashland Service Area.  
SJWD is a wholesale treated water provider to the Ashland Service Area, CDPH Purveyor No. 3410030.
2. Water use from SJWD Contract No. 6-07-20-W1373-LTR1 (CVP), 5-Year average from 2005-2009.
3. Water use from SJWD Contract No. 14-06-200-152A (Pre-1914), 5-Year average from 2005-2009.

**Table 1B - Surface Water Supply for Folsom Main Service Area <sup>1</sup>**

***Surface Water Supply***

<b>2009 Month</b>	<b>Federal Urban Water Contract W1372<sup>2</sup> (acre-feet)</b>	<b>Federal Agric. Water (acre-feet)</b>	<b>State Water (acre-feet)</b>	<b>Local Water Contract 5515A<sup>3</sup> (acre-feet)</b>	<b>Local Water Contract 4816A<sup>4</sup> (acre-feet)</b>	<b>Other Water (define) (acre-feet)</b>	<b>Total (acre-feet)</b>
January	0	0	0	1,250	21	0	1,271
February	0	0	0	1,079	0	0	1,079
March	0	0	0	1,210	186	0	1,396
April	0	0	0	1,430	515	0	1,945
May	105	0	0	1,941	253	0	2,299
June	125	0	0	2,137	400	0	2,662
July	155	0	0	2,555	500	0	3,210
August	155	0	0	2,409	600	0	3,164
September	125	0	0	2,192	500	0	2,817
October	100	0	0	1,644	400	0	2,144
November	80	0	0	1,213	400	0	1,693
December	70	0	0	888	425	0	1,383
<b>TOTAL</b>	<b>915</b>	<b>0</b>	<b>0</b>	<b>19,948</b>	<b>4,200</b>	<b>0</b>	<b>25,063</b>

1. Water treated at the Folsom Water Treatment Plant, CDPH Purveyor No. 3410014.

2. City of Folsom subcontract with SCWA for Contract No. 6-07-20-W1372 (CVP).

3. City of Folsom Contract No. 14-06-200-5515A (Pre-1914).

4. City of Folsom Contract No. 14-06-200-4816A (Pre-1914).

***Table 2***

***Ground Water Supply***

<b>2009 Month</b>	<b>District Groundwater (acre-feet)</b>	<b>Private Groundwater (acre-feet)</b>
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
TOTAL	0	0

\*normally estimated



**Table 3*****Total Water Supply***

<b>2009 Month</b>	<b>Surface Water Supply (acre-feet)</b>	<b>District Groundwater (acre-feet)</b>	<b>Recycled M&amp;I (acre-feet)</b>	<b>Total District (acre-feet)</b>
January	1,324	0	0	1,324
February	1,256	0	0	1,256
March	1,544	0	0	1,544
April	2,054	0	0	2,054
May	2,438	0	0	2,438
June	2,845	0	0	2,845
July	3,415	0	0	3,415
August	3,365	0	0	3,365
September	2,992	0	0	2,992
October	2,259	0	0	2,259
November	1,774	0	0	1,774
December	1,444	0	0	1,444
TOTAL	26,710	0	0	26,710

Recycled wastewater is treated urban wastewater that is reused

**Table 4*****Distribution System***

<b>2009 Area or Line</b>	<b>Length (feet)</b>	<b>Leaks (acre-feet)</b>	<b>Breaks (acre-feet)</b>	<b>Flushing/Fire (acre-feet)</b>	<b>Total (acre-feet)</b>
<b>Construction water</b>	0	0	0	0	35
<b>Flushing water</b>	0	0	0	7	7
	0	0	0	0	0
<b>Unaccounted for (10%)</b>	0	0	0	0	2,671
<b>See Section 2, E.3.</b>	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
<b>TOTAL</b>	0	0	0	7	2,713

**Table 6****2009 District Water Inventory**

<b>Water Supply</b>	Table 3		26,710
<b>Environmental Consumptive Use</b>		minus	0
<b>Groundwater Recharge</b>	(Perc ponds & recharge wells)	minus	0
<b>Water Exchanges or Transfer</b>	(into or out of the district)	minus / plus	0
<b>Flushing / Fire</b>	Table 4b	minus	7
<b>Distribution System Leaks &amp; Breaks</b>	Table 4b	minus	2,671
<b>Non-Urban (Agricultural) Deliveries</b>	<2,000 AF	minus	0
<b>Water Supply Available for Sale</b>			24,032
<b>2009</b>			
<b>Actual M&amp;I Water Sales</b>	<b>From District Records</b>		<b>24,039</b>
<b>Inside Use</b>	Feb use x 12	minus	15,072
<b>Landscape / Outside Use</b>	(calculated)		8,967

**Table 8*****Annual Water Quantities Delivered Under Each Right or Contract***

<b>Year</b>	<b>Federal Urban Water (acre-feet)</b>	<b>Federal Urban Water (acre-feet)</b>	<b>State Water (acre-feet)</b>	<b>Local Water (acre-feet)</b>	<b>Local Water (acre-feet)</b>	<b>Local Water (acre-feet)</b>	<b>Total (acre-feet)</b>
2000	300	0	0	1,024	18,908	0	20,232
2001	293	0	0	845	21,000	0	22,138
2002	269	0	0	882	22,000	1,549	24,700
2003	155	0	0	952	22,000	4,373	27,480
2004	176	0	0	1,239	22,000	4,964	28,379
2005	290	0	0	1,271	22,000	2,889	26,450
2006	243	0	0	1,452	22,000	4,826	28,521
2007	398	0	0	1,422	22,000	4,759	28,579
2008	314	187	0	1,294	21,707	5,804	29,306
2009	0	915	0	1,647	19,948	4,200	26,710
Total	2,438	1,102	0	12,028	213,563	33,364	262,495
Average	244	110	0	1,203	21,356	3,336	26,250

## **ATTACHMENT H**

### **Notices of District Education Programs and Services Available to Customers**



## Water Conservation

Folsom has a comprehensive Water Management Program. An important component of that program is the iConserve outreach campaign -- a proactive effort to educate residents about the need for water conservation and to share water conservation tips and strategies.

## Water Management Program

Folsom's Water Management Program offers a variety of water efficiency services and information to City residents and businesses. Water conservation services include:

- **iConserve Campaign**  
A public awareness campaign that focuses on water conservation education, encourages Folsom residents and businesses to reduce water use to inform them on how they can each do their part. See [iConserve Ads](#).
- **Water Wise House Calls**  
A free evaluation of indoor and outdoor water use for residential water customers, including an irrigation checkup. [Read more](#) about the Water Wise House Calls.
- **Commercial Water Audits**  
How water efficient is your business? We can help you identify wasteful practices and fixtures that will save water and money.
- **Large Landscape Irrigation Audits**  
A more detailed evaluation of irrigation systems for our customers with larger landscapes.
- **Rebates**  
Folsom has a variety of rebates designed to help you be more water efficient from replacing older inefficient toilets and clothes washers to improving your irrigation systems. [Read more](#) to see if you qualify for a rebate.
- **Community Presentations**  
We are available to speak to any community group on a wide range of water conservation subjects including water wise landscaping and irrigation, new technology or other current water issues.
- **Water Waste Enforcement**  
Help us protect the safety and reliability of our water supply. If you see a water waste problem anywhere in Folsom on residential or commercial, public or private properties please let us know at 355-7252 or send an e-mail to [waterconservation@folsom.ca.us](mailto:waterconservation@folsom.ca.us)



# **FREE WORKSHOP**

## **Maintain Your Water-Wise Garden**

**Thursday, JUNE 24th 6:30 - 8:30 pm**  
**Senior & Arts Center at 48 Natoma**



Save water while enhancing the health and appearance of your landscape. Master Gardener Nocolai Laquaglia will share techniques for lawn care, fertilization, pruning, pest control, mulch and compost.

**Door Prizes & Light Refreshments**



Reserve your seat **TODAY** at (916) 355-7252  
or [WaterConservation@folsom.ca.us](mailto:WaterConservation@folsom.ca.us)



**Sponsored by City of Folsom's Utilities Department**

CITY OF  
**FOLSOM**  
DISTINCTIVE BY NATURE

# **FREE** **WORKSHOP** **WATER- WISELY**



**Thursday, May 27**

**6:30 - 8:30pm**

**Senior & Arts Center, 48 Natoma**

**with the City of Folsom  
Water Management Coordinator,  
Don Smith**

**Watering correctly is a mystery for many homeowners. Learn how long to water, how much water your landscape needs, the best type of controller or sprinkler and how to convert to a drip system.**



**Sponsored by Teichert Construction  
and the City of Folsom's Utilities Department**

**Reserve your seat TODAY at (916) 355-7252  
Door Prizes & Light Refreshments**



**FOLSOM**  
DISTINCTIVE BY NATURE



# **FREE** **WORKSHOP** **WATER-** **WISELY**



**Thursday, May 27**

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**Sponsored by Teichert Construction  
and the City of Folsom's Utilities Department**

**Reserve your seat TODAY at (916) 355-7252  
Door Prizes & Light Refreshments**



**FOLSOM**  
DISTINCTIVE BY NATURE

a little goes a long way...

# Wait to Water



## **REMEMBER!**

Seasonal rainfall provides all the moisture your landscape needs during spring time. The soil is still moist and does not need a lot of water. Overwatering causes more problems than underwatering.



**Folsom's Water Conservation Rebate Programs recently changed.**  
Please check [iConserve.folsom.ca.us](http://iConserve.folsom.ca.us) *before* applying.

**City of Folsom Water Management Program (916) 355-7252**



**FOLSOM**  
CALIFORNIA





# **FREE** **Workshop!**

## Design Your **Water-Wise Garden**

**Thursday, March 25**

**6:30 - 8:30pm**

**Senior & Arts Center, 48 Natoma**

**with Landscape Designer  
Cheryl Buckwalter**



**Reserve your seat TODAY  
at (916) 355-7252**

**Door Prizes &  
Light Refreshments**

**Learn to create beautiful,  
water conserving gardens  
and landscapes while saving  
money, time and water.**



**Sponsored by**

**Kikkoman Foods and the City of Folsom's Utilities Department**



**FOLSOM**  
DELIGHTFUL BY NATURE

# Turn off YOUR SPRINKLERS!

Mother Nature has it covered.



## **REMEMBER!**

Seasonal rainfall provides all the moisture your dormant landscape needs during shorter and colder winter days.

## **Need HELP?**

Schedule a free sprinkler system check-up.  
Call (916) 355-7252



**City of Folsom Water Management Program (916) 355-7252**



**CITY OF FOLSOM**  
ESTABLISHED BY ACT OF 1951



# Water<sup>with the</sup> Weather



## **REMEMBER!**

- As the days grow shorter and temperatures drop, your landscape requires less water

## **ADJUST Irrigation Timers!**

- Change your timers to water less during the fall

## **Need HELP?**

- Schedule a free sprinkler system check-up. Call (916) 355-7252



**City of Folsom Water Management Program (916) 355-7252**



**FOLSOM**  
CITY OF  
DISTINCTIVE BY NATURE

# **DROUGHT CONTINUES**

**and So Does STAGE 2 Water Alert**

**Mandatory outdoor watering schedule:**

**EVEN street numbers, Wed, Fri & Sun**

**ODD street numbers, Tues, Thur & Sat**

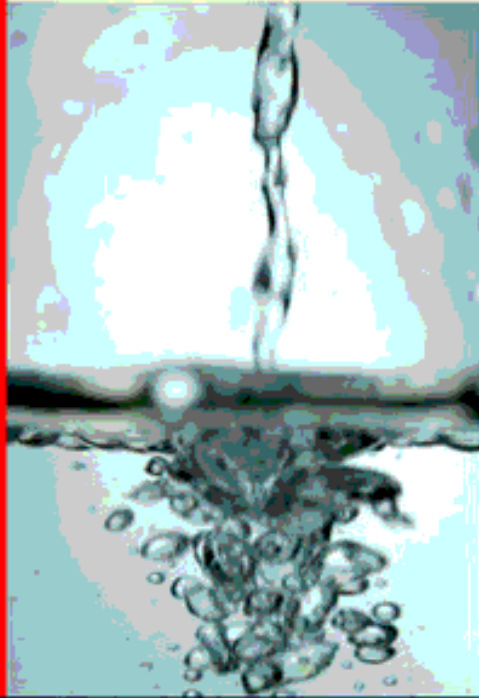


**Learn more at [http: iConserve.folsom.ca.us](http://iConserve.folsom.ca.us) or 355-7252**



**CITY OF  
FOLSOM**  
DISTINGUISHED BY NATURE

# REDUCE



# WATER USE

**Limit landscape watering to 2 days per week during coolest time of day. Use short cycles to avoid run-off.**

**Schedule a FREE Water Wise House Call for tips and rebates.**

**Visit <http://iConserve.folsom.ca.us>**



## Water Wise House Calls

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### **Sign up for Your FREE Water Wise House Call Today**

Water customers may receive a free evaluation of indoor and outdoor water use, including an irrigation check-up. Call the Water Management Program at (916) 355-7252 or send an e-mail to [waterconservation@folsom.ca.us](mailto:waterconservation@folsom.ca.us) to request a free water use survey.

#### ***What is a Water-Wise House Call?***

It is a free service provided by the Water Management Program for all Folsom water customers. City staff will evaluate your water usage and make recommendations on how you can use water more efficiently. Typically, up to 70 percent of residential water use occurs outdoors.

A free Water Wise House Call survey includes:

- A site inspection and evaluation of the landscape, irrigation equipment, irrigation system design and assistance in programming controllers for effective watering schedules.
- Brochures on water-wise landscaping.
- Discussion on interior fixture conservation measures.
- Low-flow showerhead, toilet tank tummy, toilet tank leak dye, low-flow kitchen and bathroom sink aerator, and/or a garden hose nozzle will be offered.

#### ***How do I get the free residential water survey?***

Call 355-7252 or send an e-mail to [waterconservation@folsom.ca.us](mailto:waterconservation@folsom.ca.us). Water surveys are scheduled on weekdays by appointment. A survey normally takes about one hour for a typical residence.

#### ***Why should I schedule a water survey?***

Up to 50% of residential water use is outside the home. A water use survey will give you important information on improving the effectiveness of your landscape irrigation and reducing water waste.

#### ***What does it cost?***

Nothing. It is a free service provided by the City for all water customers.

#### ***Do I have to be home?***

Yes. You must be home to allow access to gated yards and to operate automatic controllers.



## Rebates

### High Efficiency Toilet Rebate



click for [Fact Sheet](#) [Application](#) [Product Information](#)

### Smart Irrigation Controller Rebate



click for [Fact Sheet](#) [Application](#) [Product Information](#)

### High Efficiency Clothes Washer Rebate



click for [Fact Sheet](#) [Application](#) [Product Information](#)

## **City of Folsom High Efficiency Toilet Rebate Program Fact Sheet**

- Residential water customers of the City of Folsom are eligible to receive up to \$175 with a new High Efficiency Toilet (HET) which flushes 1.28 gallons per flush (gpf) or less.
- 1.6 gpf, Ultra Low Flow Toilets, (ULFT) are no longer eligible for rebates as of January 1, 2010.
- Purchase of material must occur within the program period of January 1, 2010 to December 31, 2010. Rebates are first-come, first-served and end when funds are exhausted or program ends.
- Residential, commercial, industrial, institutional, and multi-family properties are eligible.
- You must be replacing a toilet using 2 gpf or greater (non-ULFT or non-HET) to be eligible.
- Replacement of a ULFT, 1.6 gpf, will be considered if it is non-performing, requiring multiple flushes or clogs often, on a case by case basis and a preinspection is required.
- New construction is not eligible under this program.
- You may install the toilet(s) yourself or hire a licensed contractor.
- Print the application and fill out both sides completely.
- Incomplete applications will be returned to the customer.
- Return the application to... City of Folsom, Water Management Program, 50 Natoma St, Folsom, CA, 95630, along with the original dated receipt and/or plumber's invoice with the price, model and brand of each toilet listed individually. Keep a copy for your records.
- Submitting a signed application represents agreement to have your water provider verify the existing toilet and installation of the specified toilet(s) with your accompaniment. Your water provider may schedule a pre-and/or post-inspection.
- Eligible expenses include 1.28 gpf or less tank, bowl, seat, supply line, wax ring, caulking, bolts, bolt covers, and tax up to the rebate amount.
- The City of Folsom will issue rebates within eight to ten weeks of receipt of your completed application materials.
- For businesses, HETs, water efficient flush valve toilets (1.28 gpf or less), low flush urinals (LFU) that flush 0.5 gpf or less and non-flushing (waterless) urinals (NFU) qualify for a rebate of up to \$200.

**Questions? Call the City Folsom, Water Management Program, 355-7252**

<http://www.epa.gov/WaterSense/pubs/toilets.htm>

**Water Sense HET list**

[http://www.epa.gov/WaterSense/pp/find\\_het.htm](http://www.epa.gov/WaterSense/pp/find_het.htm)

## **City of Folsom Smart Irrigation Controller Rebate Program Fact Sheet**

1. The Applicant must contact the City of Folsom, Water Management Program to schedule an appointment for an onsite "Pre-Qualification Inspection." A Water Management Program staff person will complete the provider's portions of a PreQualification Inspection Report and Approval Form and sign and date it indicating approval of the site and equipment the Applicant proposes to install.
2. Appointments can be scheduled by calling 355-7252 or e-mailing [waterconservation@folsom.ca.us](mailto:waterconservation@folsom.ca.us).
3. The purchase and installation of all equipment approved by the water provider's conservation staff and noted as "Pre-Qualified Equipment" on the PreQualification Inspection Report and Approval Form must be installed within 60 days from the date of the Pre-Qualification Inspection.
4. After installation of the approved equipment, the Applicant must call for a final "Post-Installation Inspection" appointment within 60 days of the date of the PreQualification Inspection.
5. The Applicant should complete the Rebate Application, sign and date it, and return the form to the City of Folsom, Water Management Program, 50 Natoma St. Folsom, CA, 95630 with original receipts for the purchase of all approved equipment. Submission of original receipts is required to be eligible for a rebate under this program. If your contractor purchases the materials, please obtain a separate invoice for materials and ensure that the invoice is marked paid and states: "Labor billed separately." Incomplete applications will be returned to the applicant.
6. Your rebate check will be issued by your water provider within approximately 90 days from the final Post-Installation Inspection. The check will be made payable to the Applicant and mailed to the mailing address shown on this application.

### **Eligibility Guidelines**

1. The Applicant applying for the rebate must be a water service customer of the City of Folsom, and the site where the equipment is installed must be in that water provider's service territory.
2. Rebates are only available to upgrade existing in-ground irrigation systems and/or automatic timers, not new irrigation system installations.
3. The maximum rebate for irrigation system efficiency improvements, in ground equipment, is 50% of the qualified material costs, not to exceed \$200.00 per customer. Labor and installation costs for irrigation system efficiency improvements are not eligible for rebates.
4. The maximum rebate for the purchase of a "Smart" (i.e., weather-based) irrigation controller is the purchase cost of the controller and signal service for a maximum of two years, if needed, is up to \$500.00 per customer. No rebates will be provided for just the signal service for an existing Smart irrigation controller installation.
5. Only those smart controllers on the Irrigation Association's Smart Water Application Technology (SWAT) tested list are eligible for the rebate. The list can be found at - <http://www.irrigation.org/SWAT/Industry/ia-tested.asp>
6. If a signal based "Smart" irrigation controller is chosen, the Applicant agrees to maintain signal service at his or her own expense for a minimum of 5 years and such commitment will be in addition to any time period paid for by the rebate.

7. The maximum rebate for professional installation of a “Smart” irrigation controller is \$150.00. The installation must be performed by a licensed California landscape contractor C-27 or irrigation specialty contractor C-61 / D-12 and/or an installer Certified by the Irrigation Association. Qualified installers may be found on the following lists;

### **The Green Gardener**

<http://www.rwah2o.org/rwa/educated/gardens/GreenGardener/index.cfm#five>

### **RWA Preferred Smart Controller Installers**

(Coming Soon)

8. Any contractor used for this program must be licensed by the California Contractors’ State Licensing Board and hold a Class C-27 landscape contractor or C-61/D-12 sprinkler specialty contractor license, or be certified by the Irrigation Association as a Certified Landscape Irrigation Auditor or Certified Irrigation Contractor.
9. The Pre-Qualification Inspection by the Applicant’s local water provider must be performed before the application will be approved. **Any project started before the onsite survey is performed will not be eligible for a rebate.**
10. The Post-Installation Inspection must also be timely performed by the Applicant’s local water provider before the rebate will be approved for payment.
11. Payment of rebates is dependent on grant funding and is subject to availability of funds.
12. All applications for rebates under the RWA Smart Irrigation Rebate Program must be submitted by no later than December 31, 2010.

**Questions? Call the City Folsom, Water Management Program, 355-7252**

### **PRODUCT INFORMATION AND PERFORMANCE RATINGS**

SWAT tested list

<http://www.irrigation.org/SWAT/Industry/ia-tested.asp>

California Urban Water Conservation Council Landscape Irrigation Technologies Info

<http://www.cuwcc.org/products/landscape-irrigation-technologies.aspx>

## **City of Folsom High Efficiency Clothes Washer Rebate Program Fact Sheet**

1. Purchase a new, high efficiency clothes washer between the dates of January 1, 2010 – December 31, 2010 or until rebate program funds are depleted.
2. **Check [smud.org](http://www.smud.org) for updated program funding availability and the CEE Clothes Washer Qualifying Product List (Tier 2 – water factor 6.0 and Tier 3 – water factor 4.5) for eligible clothes washers [www.cee1.org](http://www.cee1.org).**
3. Purchase must be installed at a site served by the City of Folsom Water Service.
4. Submit a completed rebate application form (within **30 days** of installing your clothes washer) via mail to the **SMUD** address on the application. You need to submit the following items:
  - (1) Completed application form
  - (2) Copy of water service bill (past 6 months)
  - (3) Copy of purchase receipt dated on or after January 1, 2010.
5. Submitting a signed application represents agreement to have your water service provider verify installation of the clothes washer, with your accompaniment. Your water service provider (or their representative) may schedule an inspection.
6. Rebates are \$50 to \$100 for residential and multi-family (including mobile home, condos, etc.) customers only.
7. SMUD will issue rebate checks within six to ten weeks of receipt of your completed application materials.
8. The water service providers or their representatives are required to send IRS form 1099 to the customer and the IRS when rebates total \$600 or more.

### **Qualifications**

1. Applicants must be a current City of Folsom Water customer to be eligible for the water service provider rebate. You may qualify for an additional rebate from SMUD if you have an electric water heater. Check with SMUD, [www.smud.org](http://www.smud.org), for details.
2. Purchase of material must occur within the program period of January 1, 2010 – December 31, 2010 (or until funds are depleted). The number of rebates is dependent upon the availability of program funds. Check the SMUD web site [www.smud.org](http://www.smud.org) or call SMUD at 1-888-742-SMUD to see if funds are currently available.
3. Residential and multi-family residents or property owner applicants are eligible with water service provider bill provided as proof of address for site of installation.
4. Customer is eligible to receive only one clothes washer rebate per address per calendar year.

**Questions? Call the City Folsom, Water Management Program, 355-7252**

SMUD approved high efficiency clothes washer list  
<http://www.cee1.org/resid/seha/rwsh/rwsh-prod.pdf>

SMUD high efficiency clothes washer information sheet  
[http://www.smud.org/en/rebates/Documents/clothes\\_washer\\_2009\\_factsheet.pdf](http://www.smud.org/en/rebates/Documents/clothes_washer_2009_factsheet.pdf)

## **ATTACHMENT I**

### **Water Meter Manufacturer Standards for Urban Measurement Device Table**

# SR<sup>®</sup> Meter

Displacement Type Magnetic Drive Cold Water Meters

## 5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm) Sizes

### DESCRIPTION

**Applications:** Measurement of cold water where flow is only in one direction; in residential, commercial and industrial services.

**Conformance To Standards:** Sensus Sealed Register<sup>®</sup> Water Meters comply with ANSI/AWWA Standard C700, latest revision. Each meter is tested to insure compliance.

**Construction:** Sensus SR Water Meters consist of three basic components: maincase; measuring chamber; and permanently, hermetically-sealed register. Maincases are of bronze with externally-threaded spuds. Measuring chambers are of Rocksyn<sup>®</sup>, a corrosion-resistant thermoplastic material. Bronze measuring chambers are available as an option.

Maincase bottom plates are available in bronze or, if frost protection is desired, in cast iron or synthetic polymer. Simplicity of design and precise machining of components allows interchangeability of parts among like-size meters to provide ease of maintenance. The register, measuring chamber and strainer can be removed without removing the maincase from the installation.

**Sealed Register:** Permanently, hermetically sealed; proven magnetic drive design; with integral tamper-proof locking device. Guaranteed for 25 years. The standard register includes a straightreading, odometer-type totalization display; a 360° test circle with center sweep hand; and a low flow (leak) detector. Gears are self-lubricating, molded plastic for long life and minimum friction. The hermetic sealing of the register eliminates dirt and moisture, tampering, and lens fogging problems.

No change gears are required for accuracy calibration. Encoded-type remote reading systems are available for all SR Water Meters. (See back of sheet for additional information.)

**Tamperproof Features:** Removing the register to obtain free water is prevented by a locking system inside the meter. Removing the register requires a special tool that is available only to water utilities.

**Magnetic Drive:** The unique design of the direct magnetic drive is a positive, reliable, dependable drive coupling, proven in millions of SR Water Meters.

**Operation:** Water flows through the meter's strainer and into the measuring chamber where it operates the piston. The piston, which moves freely, oscillates around a central hub, guided by the rubber-coated division plate.

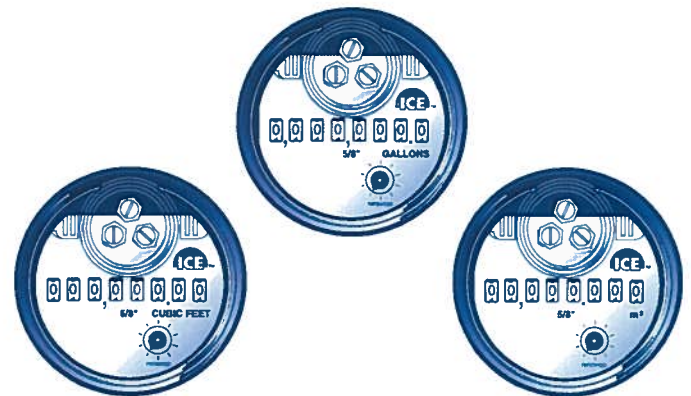
A drive magnet, incorporated in the piston, rotates around the outside of the hermetically sealed register well and



5/8" SR\*  
(DN 15mm)

3/4" SR\*  
(DN 20mm)

1" SR\*  
(DN 25mm)



5/8" (DN 15mm) Dials Shown

magnetically drives the "follower" magnet sealed within the well. The "follower" magnet drives a crank connected to the register gear train, which translates the number of piston oscillations into volume totalization units displayed on the register face.

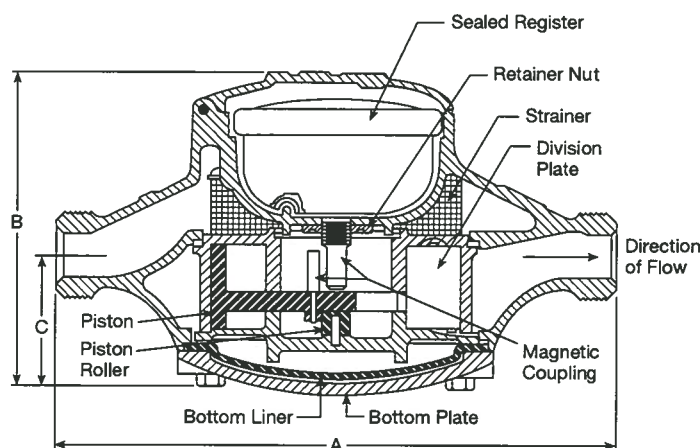
**Maintenance:** Sensus Sealed Register<sup>®</sup> Water Meters are engineered to provide long-term value and virtually maintenance-free operation because of their design simplicity and interchangeability of modules. Sensus SR<sup>®</sup> Water Meters are easy to repair, even without removing the maincase from the installation. As an alternate to repair by the utility, Sensus offers various maintenance programs which provide factory reconditioning of the maincase and replacement of components at low fixed prices.

**Connections:** Tailpieces/Unions for installing the meters on a variety of pipe types and sizes are available as an option.

**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus SR<sup>®</sup> Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details, or see Bulletin G-500.





## DIMENSIONS AND NET WEIGHTS

Metric Size	A	B	B <sup>2</sup>	C	Width	Net Weight <sup>1</sup>
5/8" (DN 15mm)	7-1/2" (190mm)	4-9/16" (115mm)	6-1/8" (155mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 12 oz. (2.6 kg)
5/8" x 3/4" (DN 15mm x 33mm)	7-1/2" (190mm)	4-9/16" (115mm)	6-1/8" (155mm)	2-1/8" (55mm)	4-5/8" (120mm)	5 lb. 15 oz. (2.7 kg)
3/4" (DN 20mm)	9" (230mm)	5-1/8" (130mm)	6-3/4" (171mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
3/4" short (DN 20mm)	7-1/2" (190mm)	5-1/8" (130mm)	6-3/4" (171mm)	2-9/32" (60mm)	5-1/4" (135mm)	8 lb. (3.6 kg)
1" (DN 25mm)	10-3/4" (275mm)	5-3/4" (145mm)	7-3/8" (187mm)	2-5/8" (70mm)	6-13/16" (175mm)	12 lb. (5.5 kg)

<sup>1</sup> With Rocksyn measuring chamber.

<sup>2</sup> The measurement to the top of a TR/PL on an ICE register.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of cold water with flow in one direction only.
<b>NORMAL OPERATING FLOW RANGE <sup>1</sup></b>	5/8" (DN 15mm) size: 1 to 20 gal/min. (0.25 to 4.5 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 2 to 30 gal/min. (0.45 to 7.0 m <sup>3</sup> /h) 1" (DN 25mm) size: 3 to 50 gal/min. (0.7 to 11.0 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW REGISTRATION</b>	5/8" (DN 15mm) size: 95% at 1/4 gal/min. (0.96 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 95% at 1/2 gal/min. (0.10 m <sup>3</sup> /h) 1" (DN 25mm) size: 95% at 3/4 gal/min. (0.15 m <sup>3</sup> /h)
<b>MAXIMUM PRESSURE LOSS</b>	5/8" (DN 15mm) size: 10.8 psi at 20 gal/min. (0.7 bar at 4.5 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 11.0 psi at 30 gal/min. (0.8 bar at 7.0 m <sup>3</sup> /h) 1" (DN 25mm) size: 10.9 psi at 50 gal/min. (0.8 bar at 11.0 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>MEASUREMENT ELEMENT</b>	Oscillating piston
<b>REGISTER</b>	Straight reading, hermetically sealed magnetic drive. Remote reading unit optional.
<b>REGISTRATION</b>	5/8", 3/4", 1": 10 gallons, 1 cubic foot, 0.01 m <sup>3</sup> or 0.1 m <sup>3</sup> /sweep hand revolution. 5/8", 3/4", 1": odometer wheels (10,000,000 gallons, 1,000,000 cubic feet or 100,000 m <sup>3</sup> )

**METER CONNECTIONS <sup>2</sup>**

5/8" (DN 15mm) size: 3/4" (26.44mm) threads  
 5/8" x 3/4" (DN 15mm x 33mm) size: 1" (33.25) threads  
 3/4" (DN 20mm) size: 1" (33.25mm) threads  
 3/4" x 1" (DN 20mm x 42mm) size: 1-1/4" (41.91mm) threads  
 1" x 1-1/4" (DN 25mm x 48mm) size: 1-1/2" (47.75mm) threads  
 (All threads are straight pipe, external type, conforming to ANSI B1.20.1, or ISO R228, if specified.)

**MATERIALS <sup>3</sup>**

Maincase—Bronze  
 Measuring chamber—Rocksyn  
 Bottom plate—Bronze, cast iron or synthetic polymer  
 Magnets—Alnico  
 Trim—Stainless Steel  
 Casing bolts—Stainless Steel  
 Strainer—Thermoplastic

<sup>1</sup> Maximum rates listed are for intermittent flow only. Maximum continuous flow rates as specified by AWWA are:

5/8" (DN 15mm)—10 gal/min (2.3 m<sup>3</sup>/h)

3/4" (DN 20mm)—15 gal/min (3.4 m<sup>3</sup>/h)

1" (DN 25mm)—25 gal/min (5.7 m<sup>3</sup>/h)

<sup>2</sup> Unless otherwise noted, 5/8" size and 5/8" x 3/4" characteristics are identical.

5/8" x 3/4" designates 5/8" with 3/4" connection thread. Metric designation is the normal bore x the outside diameter.

<sup>3</sup> Synthetic polymer maincase bottom plate available on 5/8" meter only.



# 400 Series IIS

**Mueller** SYSTEMS

## Magnetic Drive Positive Displacement Disc Meters Sizes 5/8" - 3/4" - 1"

### Features

**APPLICATIONS:** Measurement of cold water for residential and small commercial applications where water volumes are low, and low flow sensitivity is important.

**CONFORMANCE TO STANDARDS:** Hersey Series 400 IIS Water Meters comply with latest version of ANSI/AWWA Standard C700. Meters which are manufactured with the EnviroBrass® maincase option meet the requirements of NSF Standard 61. Each meter is tested to ensure compliance.

**CONSTRUCTION:** Hersey 400IIS Water Meters consist of three basic parts: maincase; measuring chamber; and permanently sealed register. The maincase is made of bronze for long life. Direction of flow arrows and model are cast into each maincase. The bottom cover is epoxy-coated cast iron with a molded plastic liner separating it from the waterway. Optional plastic and bronze bottom covers are available. The measuring chambers are large for reduced wear during operation. The measuring chamber, integral strainer, nutating disc and thrust roller are thermoplastic, which is dimensionally stable and will not corrode. The thrust roller moves smoothly along a stainless steel wear plate to reduce friction and maintain accuracy. The register box and lid are available in plastic or bronze. The meter is designed so that the register can be replaced without removing the meter from the line.

**REGISTER:** The permanently sealed register has a unique seal and heat-treated glass to eliminate dirt, moisture infiltration and lens fogging. An integral tamper-proof locking feature is provided to resist tampering with the register. The totalizing register has a straight-reading odometer type display, a 360° test circle with center sweep hand and a low flow (leak) detector. Standard gearing is used, making registers interchangeable by size. All Hersey meter Models have electronic meter reading systems available for increased reading efficiency (see Meter Reading Systems.)

**OPERATION:** Water flows through the meter's strainer where debris is screened out. The incoming water fills a known volume of the measuring chamber on one or the other side of a movable disc that separates the chamber into two sections. As water enters, it moves the disc (nutates), forcing a known volume of water out of the meter from the opposite side of the disc. The process repeats as the sections refill and empty in turn. The nutating action of the disc is coupled magnetically to the register to indicate the volume of water that passes through the meter. The large capacity measuring chamber requires fewer nutations of the disc for each gallon measured, which helps to limit wear, extend the life of the meter, and reduce pressure loss.

**MAINTENANCE:** The Hersey Series 400 IIS Water Meters are designed and manufactured to provide long service life with virtually no maintenance required.

**CONNECTIONS:** Supplied with external straight pipe threads (NPSM) per ANSI B1.20.1.



430IIS with Integral HOT ROD

### Materials and Specifications

MODEL NUMBER	430IIS, 442IIS, 452IIS
SIZES	5/8"x1/2", 5/8"x3/4", 3/4"x3/4", 3/4"x1" and 1"x1"
STANDARDS	Manufactured and tested to meet or exceed all applicable parts of ANSI/AWWA C700 Standard EnviroBrass options meet requirements of NSF Standard 61.
SERVICE	cold water measurement with flow in only one direction
OPERATING FLOW RANGE	See Chart on the following page
ACCURACY	See Chart on the following page
PRESSURE LOSS	See Chart on the following page
MAXIMUM WORKING PRESSURE	150 PSI
TEMPERATURE RANGE	33F to 100F Water Temperature
MEASURING ELEMENT	Nutating Disc
DISC NUTATIONS (per Gallon)	430IIS: 49.6, 442IIS: 22.4, 452IIS: 11.7
REGISTER TYPE	Straight reading, permanently sealed, magnetic drive with low flow indicator. Remote reading units optional.
METER CONNECTIONS	1/2", 3/4", 1" external (NPSM) straight pipe threads per ANSI B1.20.1
MATERIALS	Meter case – bronze UNSC84400; Bottom cover – cast iron ASTM A126 CL. B; Chamber top/bottom – thermoplastic; Nutating disc – thermoplastic; Disc pin – stainless steel; Thrust roller – thermoplastic; Wear plate – stainless steel; Coupling – Ceramic magnet; Strainer – thermoplastic; Coupling shaft – stainless steel ANSI B18; Top cover bolts – stainless steel ANSI B18; Bottom cover bolts – stainless steel ANSI B18; Register box and lid – thermoplastic.
OPTIONS	Meter case – EnviroBrass® UNSC89520 Bottom cover – bronze UNSC84400 or thermoplastic; EnviroBrass Register box and lid – bronze UNSC85700; AMR Reading Systems

### Meter Registration

Meter Size	Initial Dial*	Capacity	Initial Dial*	Capacity
5/8"	10 Gallons	10 Million	1 Cubic Feet	1 Million
3/4"	10 Gallons	10 Million	1 Cubic Feet	1 Million
1"	10 Gallons	10 Million	1 Cubic Feet	1 Million

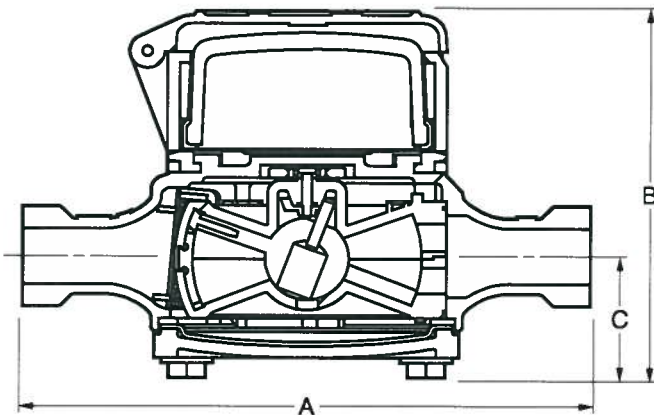
\*Registration equal to one full revolution of the sweep hand.

### Flow Characteristics

Meter Size	Typical Low Flow (95% Minimum)	Typical Operating Range (100% $\pm$ 1.5%)	Maximum Continuous Operation
5/8"	1/4 GPM	1/2 to 25 GPM	15 GPM
3/4"	1/2 GPM	3/4 to 35 GPM	25 GPM
1"	3/4 GPM	2 to 50 GPM	35 GPM

NOTE: Performance curves are typical only and NOT a guarantee of performance.

### Dimensions and Weights

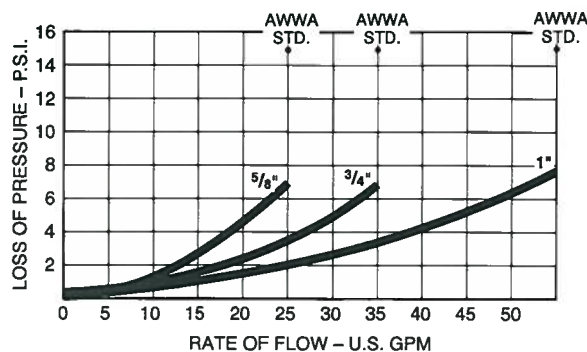


Meter Size	5/8"	3/4"	3/4" Short	3/4" x 1"	1"
Ends External (NPSM) straight pipe threads					
Model	430	442	442	442	452
Dimensions					
A	7-1/2"	9"	7-1/2"	9"	10-3/4"
B	4-15/16"	5-11/16"	5-11/16"	5-11/16"	6-5/8"
C	1-5/8"	1-15/16"	1-15/16"	1-15/16"	2-1/8"
Width	4.25"	6.39"	6.39"	6.39"	7.22"
inlet & outlet	1/2" or 3/4"	3/4"	3/4"	1"	1"
Net weight	4-1/2	8-1/2	8	9	11

### Performance

HEAD LOSS - 5/8", 3/4" AND 1"

(Figure 1)

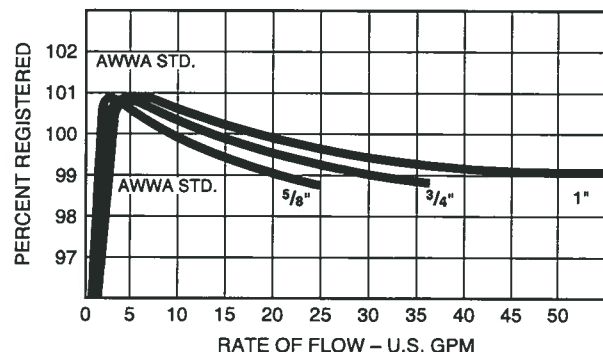


NOTE: Performance curves are typical only and NOT a guarantee of performance.

### Performance

ACCURACY - 5/8", 3/4", AND 1"

(Figure 2)





# SR II Low Lead Meters

Displacement Type Magnetic Drive Cold Water Meters

5/8" (DN 15mm), 3/4" (DN 20mm) and 1" (DN 25mm) Sizes

## DESCRIPTION

**Applications:** Measurement of cold water where flow is in one direction only; in residential, commercial and industrial services.

**Conformance To Standards:** Sensus SR II Low Lead Water Meters meet the requirements of NSF Standard 61 Annex G and comply with ANSI/AWWA Standard C700-latest revision. Each meter is tested to insure compliance with AWWA standards.

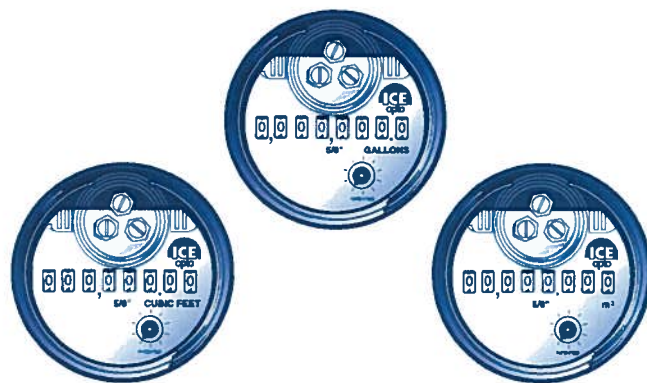
**Construction:** Sensus SR II Low Lead Water Meters consist of three basic components: maincase; measuring chamber; and sealed register. Maincases are made of Bismuth BiAlloy CDA89836 or EnviroBrass™ II C89520 with externally-threaded spuds. Registers are housed in a bonnet of synthetic polymer. Measuring chambers are of Rocksyn®, a corrosion-resistant, tailored thermoplastic material formulated for long-term performance and especially suitable for aggressive water conditions. Maincase bottom plates are available in Bismuth BiAlloy, EnviroBrass II or, if frost protection is desired, in cast iron or synthetic polymer<sup>1</sup>.

**Sealed Register:** Hermetically sealed; proven magnetic drive design eliminates dirt and moisture contamination, tampering and lens fogging problems. Standard register includes a straight-reading, odometer-type totalization display; a 360° test circle with center sweep hand; and a low flow (leak) detector. Gears are selflubricating, molded plastic for long life and minimum friction.

No change gears are required for accuracy calibration. Encodertype remote reading systems are available for all SR II Low Lead Water Meters. (See other side of sheet for additional information.)

**Tamperproof Features:** A unique locking system prevents customer removal of the register to obtain free water. The register can only be removed by breaking the register bonnet.

**Magnetic Drive:** The SR II Low Lead features a hydrodynamically cushioned design that eliminates premature wear of components. The meter utilizes a patented positive, reliable drive coupling. The high-strength magnets used will eliminate "drive slip" in normal use and also provide adequate strength to drive remote register units.



5/8" AMR/AMI System Dials Shown

**Operation:** Water flows through the meter's strainer and into the measuring chamber where it drives the piston. The hydrodynamically balanced piston oscillates around a central hub, guided by the division plate.

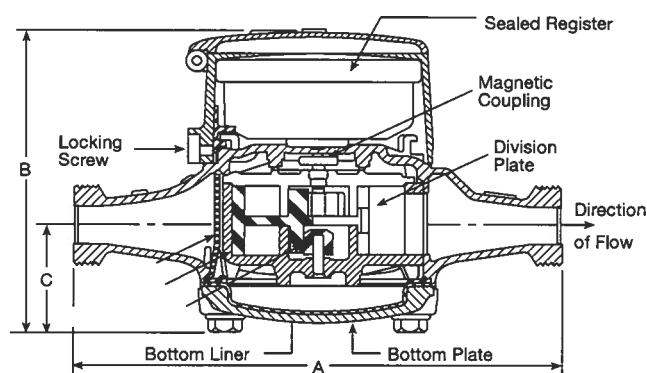
A drive magnet transmits the motion of the piston to a driven magnet located within the hermetically sealed register. The driven magnet is connected to the register gear train. It reduces the piston oscillations into volume totalization units displayed on the register dial face.

**Maintenance:** Sensus SR II Low Lead Water Meters are engineered to provide long-term value and virtually maintenance-free operation. Simplicity of design allows interchangeability of parts of like-size meters, reduced parts inventory requirements, and ease of maintenance. The register can be removed without relieving the water pressure or removing the maincase from the installation.

**Connections:** Tailpieces/Unions for installing the meters on a variety of pipe types and sizes are available.

**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus SR II Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details or see Bulletin G-500.



## DIMENSIONS AND NET WEIGHTS

Meter Size	A	B	C	Width	Net Weight <sup>1</sup>
5/8" (DN 15mm)	7-1/2" (190mm)	5.0" (127mm)	1-3/4" (44mm)	3-7/8" (98mm)	4.3 lb. (1.97 kg)
5/8" x 3/4" (DN 15mm x 33mm)	7-1/2" (190mm)	5.0" (127mm)	1-3/4" (44mm)	3-7/8" (98mm)	4.4 lb. (2.00 kg)
3/4" (DN 20mm)	9" (229mm)	5-1/2" (140mm)	2-3/16" (56mm)	4-1/2" (114mm)	6.4 lb. (2.90 kg)
3/4" x 1" (DN 20mm x 42mm)	9" (229mm)	5-1/2" (140mm)	2-3/16" (56mm)	4-1/2" (114mm)	6.6 lb. (2.99 kg)
3/4" short (DN 20mm)	7-1/2" (190mm)	5-1/2" (140mm)	2-3/16" (56mm)	4-1/2" (114mm)	6.2 lb. (2.81 kg)
1" (DN 25mm)	10-3/4" (273mm)	6-9/16" (167mm)	2-7/16" (62mm)	6-1/2" (165mm)	11.9 lb. (5.4 kg)

<sup>1</sup> With Rocksyn® measuring chamber.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of cold water with flow in one direction only.
<b>NORMAL OPERATING FLOW RANGE <sup>1</sup></b>	5/8" (DN 15mm) size: 1 to 20 gal/min. (0.25 to 4.5 m <sup>3</sup> /h) 3/4" (DN 20mm) size: 2 to 30 gal/min. (0.45 to 7.0 m <sup>3</sup> /h) 1" (DN 25mm) size: 3 to 50 gal/min. (0.7 to 11.0 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW REGISTRATION</b>	5/8" size: 95% at 1/4 gal/min. (0.06 m <sup>3</sup> /h) 3/4" size: 95% at 1/2 gal/min. (0.10 m <sup>3</sup> /h) 1" size: 95% at 3/4 gal/min (0.15 m <sup>3</sup> /h)
<b>MAXIMUM PRESSURE LOSS</b>	5/8" size: 7.0 psi at 20 gal/min. (0.5 bar at 4.5 m <sup>3</sup> /h) 3/4" size: 9.0 psi at 30 gal/min. (0.6 bar at 7.0 m <sup>3</sup> /h) 1" size: 7.3 psi at 50 gal/min. (0.5 bar at 11.0 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>MEASURING ELEMENT</b>	Oscillating piston
<b>REGISTER <sup>3</sup></b>	Straight reading, hermetically sealed, magnetic drive. Remote reading unit optional.
<b>STANDARD METER REGISTRATION <sup>3</sup></b>	10 gallons, 1 cubic foot, or 0.01 m <sup>3</sup> / or 0.1 m <sup>3</sup> /sweep hand revolution. 10,000,000 gallons, 1,000,000 cubic feet or 100,000 m <sup>3</sup> capacity. 8 odometer wheels.

**METER CONNECTIONS <sup>3</sup>** 5/8" (DN 15mm) size: 3/4" (26.44mm) threads  
5/8" x 3/4" (DN 15mm x 33mm) size: 1" (33.25) threads  
3/4" (DN 20mm) size: 1" (33.25 threads)  
3/4" x 1" (DN 20mm x 42mm) size: 1-1/4" (41.91mm) threads  
1" (DN 25mm) size: 1-1/4" (41.91mm) threads  
(All threads are straight pipe, external type, conforming to ANSI B1.20.1 or ISO R228, if specified.)

**MATERIALS** Maincase—Bismuth BiAlloy CDA89836 or EnviroBrass II C89520  
Register box—Synthetic polymer  
Measuring chamber—Rocksyn®  
Bottom plate—Bismuth BiAlloy CDA89836  
Magnets—Plasticized material  
Casing bolts—Stainless steel  
Strainer—Synthetic polymer

<sup>1</sup> Maximum rates listed are for intermittent flow only. Maximum continuous flow rates as specified by AWWA are: 5/8" (DN 15mm)—10 gal/min (2.3 m<sup>3</sup>/h), 3/4" (DN 20mm)—15 gal/min (3.4 m<sup>3</sup>/h) 1" (DN 25mm)—25 gal/min (5.7 m<sup>3</sup>/h)

<sup>2</sup> Unless otherwise noted, 5/8" size and 5/8" x 3/4" characteristics are identical. (5/8" x 3/4" designates 5/8" with 3/4" connection thread.) Also unless otherwise noted 3/4" size and 3/4" x 1" size characteristics are identical. (3/4" x 1" designates 3/4" with 1" connection thread.)

Metric designation is the normal bore x the outside diameter.

<sup>3</sup> See AMR Systems Register datasheet AMR-275 for details specifications.

# SR® Meters

Displacement Type Magnetic Drive Cold Water Meters

## 1-1/2" (DN 40mm) and 2" (DN 50mm) Sizes

### DESCRIPTION

**Applications:** Measurement of cold water where flow is in one direction; in residential, commercial and industrial services.

**Conformance To Standards:** Sensus Sealed Register Water Meters comply with ANSI/AWWA Standard C700, latest revision. Each meter is tested to insure compliance.

**Construction:** Sensus SR Water Meters consist of three basic components: maincase; measuring chamber; permanently, hermetically-sealed register. Maincases are of bronze with either flanges or internally-threaded spuds. Measuring chambers are of Rocksyn®, a corrosion-resistant thermoplastic material. Bronze measuring chambers are available as an option.

**Sealed Register:** Permanently, hermetically sealed; proven magnetic drive design; with integral tamper-proof locking device. Guaranteed for 25 years. The standard register includes a straightreading, odometer-type totalization display; a 360° test circle with center sweep hand; and a low flow (leak) detector. Gears are selflubricating, molded plastic for long life and minimum friction. The hermetic sealing of the register eliminates dirt and moisture, tampering, and lens fogging problems.

No change gears are required for accuracy calibration. Encoded type remote reading systems are available for all SR Water Meters. (See back of sheet for additional information.)

**Tamperproof Features:** Removing the register to obtain free water is prevented by a locking device inside the meter. Removing the register requires a special tool that is available only to water utilities.

**Magnetic Drive:** The unique design of the direct magnetic drive is a positive, reliable, dependable drive coupling, proven in millions of SR Water Meters.

**Operation:** Water flows through the meter's strainer and into the measuring chamber where it operates the piston. The piston, which moves freely, oscillates around a central hub, guided by the rubber-coated division plate.

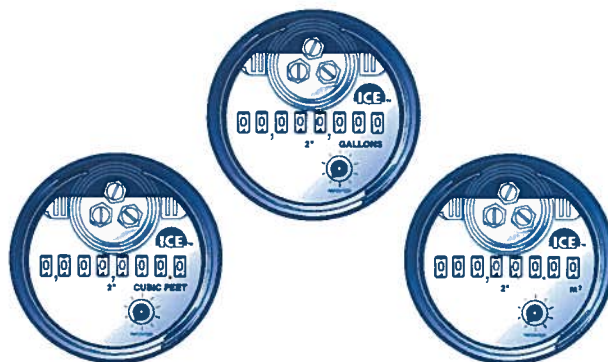
A drive magnet, incorporated in the piston, rotates around the outside of the hermetically sealed register well and magnetically drives the "follower" magnet sealed within the well. The "follower" magnet drives a crank connected to the register gear train, which translate the number of piston oscillations into volume totalization units displayed on the register face.

**Maintenance:** Sensus Sealed Register Water Meters are engineered to provide long-term value and virtually maintenance-free operation because of their design simplicity and interchangeability of modules. Sensus SR



1-1/2" SR®  
(DN 40mm)

2" SR®  
(DN 50mm)



2" (DN 50mm) Dials Shown

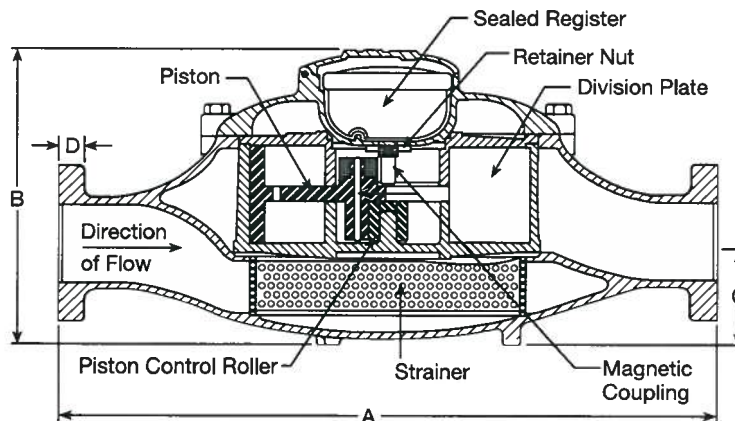
Water Meters are easy to repair, even without removing the maincase from the installation. As an alternate to repair by the utility, Sensus offers various maintenance programs which provide factory reconditioning of the maincase and replacement of components at low fixed prices.

**Connections:** Tailpieces/Companion Flanges for installing the meters on a variety of pipe and sizes are available as an option. For flanged meters, the use of a Smith-Blair Model 926 Flanged Coupling Adapter is recommended to facilitate the installation and any future removal of the meter from the line.

**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus SR® Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details, or see Bulletin G-500.





## DIMENSIONS AND NET WEIGHTS

Meter Size	Connections	A	B	B <sup>4</sup>	C	D	Width	Bolt Circle	Number of Bolts	Bolt Size	Net Weight <sup>1</sup>
1-1/2" (DN 40mm)	Flanged	13 (330mm)	6-7/8 (175mm)	8-3/4" (222mm)	2-21/32 (68mm)	5/8 (16mm)	8-3/4 (222mm)	4 (102mm)	2	5/8 (16mm)	26 lbs. (12 kg)
	Screwed	12-5/8 (322mm)	6-7/8 (175mm)	8-3/4" (222mm)	2-21/32 (68mm)	N/A <sup>2</sup>	8-3/4 (222mm)	N/A <sup>2</sup>	N/A <sup>2</sup>	N/A <sup>2</sup>	23 lbs. (10.5 kg)
2" (DN 50mm)	Flanged	17 (432mm)	7-17/32 (192mm)	9-3/8" (238mm)	2-5/8 (67mm)	5/8 (16mm)	9-11/16 (246mm)	4-1/2 (115mm)	2	3/4 (19mm)	42 lbs. (19 kg)
	Screwed	15-1/4 (388mm)	7-17/32 (192mm)	9-3/8" (238mm)	2-5/8 (67mm)	N/A <sup>3</sup>	9-11/16 (246mm)	N/A <sup>3</sup>	N/A <sup>3</sup>	N/A <sup>3</sup>	37 lbs. (17 kg)

<sup>1</sup> With Rocksyn measuring chamber.

Meter is available with either flanged or screwed end connections. Flanged end meter illustrated to show oval flange and bolt pattern. End connection threads:

<sup>2</sup> 1-1/2" (DN 40mm)—1-1/2" N.P.T. Internal Threads or 1-1/2" ISO R-7 International Threads, if specified

<sup>3</sup> 2" (DN 50mm)—2" N.P.T. Internal Threads or 2" ISO R-7 International Threads, if specified.

<sup>4</sup> The measurement to the top of a TR/PL on an ICE register.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of cold water with flow in only one direction.
<b>NORMAL OPERATING FLOW RANGE<sup>1</sup></b>	1-1/2" (DN 40mm) size: 5 to 100 gal/min. (1.1 to 23.0 m <sup>3</sup> /h) 2" (DN 50mm) size: 8 to 160 gal/min. (1.8 to 36.0 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW REGISTRATION</b>	1-1/2" (DN 40mm) size: 95% at 1-1/2 gal/min. (0.35 m <sup>3</sup> /h) 2" (DN 50mm) size: 95% at 2 gal/min. (0.45 m <sup>3</sup> /h)
<b>MAXIMUM PRESSURE LOSS</b>	1-1/2" (DN 40mm) size: 11.4 psi at 100 gal/min. (0.8 bar at 23.0 m <sup>3</sup> /h) 2" (DN 50mm) size: 12.1 psi at 160 gal/min. (0.8 bar at 36.0 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>MEASURING ELEMENT</b>	Oscillating piston
<b>REGISTER</b>	Straight reading, hermetically sealed, magnetic drive with low flow indicator. Remote reading unit optional.
<b>REGISTRATION</b>	100,000,000 gallons, 100 gallon/sweep hand revolution 10,000,000 cubic feet 10 cubic feet/sweep hand revolution 100,000 m <sup>3</sup> 0.1 m <sup>3</sup> /sweep hand revolution

<b>METER CONNECTIONS<sup>2</sup></b>	1-1/2" (DN 40mm) size: two bolt oval flanged spuds or 1-1/2" (DN 47.80mm) internal pipe threads 2" (DN 50mm) size: two bolt oval flanged spuds or 2" (59.61mm) internal pipe threads (Threads are taped pipe, internal type, conforming to ANSI B1.20.1 or ISO R-7 if specified. Flanges are AWWA 125 pounds [PN 10 bar] class.)
<b>MATERIALS</b>	Maincase—Bronze Measuring chamber—Rocksyn Magnets—ceramic and Alnico Strainer—Thermoplastic Trim—Stainless Steel Casing bolts—Stainless Steel

<sup>1</sup> Maximum rates listed are for intermittent flow only. Maximum continuous flow rates as specified by AWWA are:

1-1/2" (DN 40mm) size: 50 gal/min (11.0 m<sup>3</sup>/h)

2" (DN 50mm) size: 80 gal/min (18.0 m<sup>3</sup>/h)

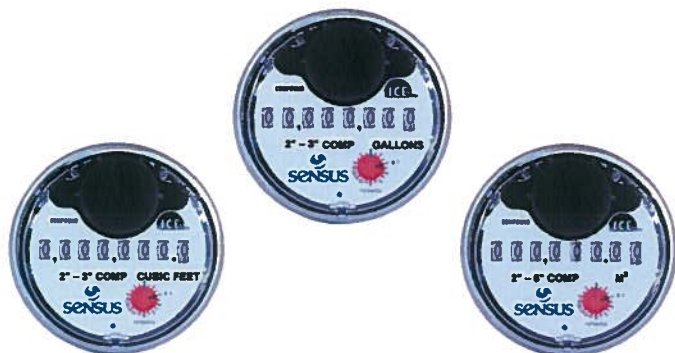
<sup>2</sup> Flanged spuds are standard for 1-1/2" (DN 40mm) and 2" (DN 50mm) size meters and will be furnished unless otherwise specified. Internal tapped pipe threads only are supplied for ISO meters.



# Compound Meters

## AWWA Class II – Single Register High-Performance Compound Meter

Size 3" (DN 80mm)



Intelligent Communications Encoder (ICE) Register



3" SRH Compound Meter

### Description

**Application:** The 3" SRH Compound Meter is designed specifically for use in cold water services where flows vary from the very large to the very small. Typical applications are apartment dwellings, office buildings, hotels, schools and smaller manufacturing facilities.

**Conformance To Standards:** SRH Compound Meters comply with ANSI/AWWA Standard C702 Class II (most recent revision). Each meter is performance tested to insure compliance.

**Construction:** The SRH Compound Meter is essentially two meters within a single bronze housing. Low flows are measured through the piston type positive displacement measuring chamber. High flows through the turbine chamber. Flows through the measuring chambers are controlled by a bronze swing action valve. The measurements of the two chambers are coordinated and recorded on a single billing register.

**Coordinator:** A separate, sealed compartment contains the reduction gearing and over-riding clutches for both chambers in one module. The compartment is oil-filled for long life and maintenance-free operation. Separate change gears for calibrating the measuring chambers are located on top of the module for easy access.

**Magnetic Drive Couplings:** The motion of the measuring chambers is transferred to the sealed coordinator and single totalizing register through magnetic couplings. This allows all reduction gearing to be out of the water. Also, the turbine's shaft is magnetically suspended, causing it to be essentially weightless in water.

**Modular Design:** The hermetically sealed register, coordinator module, positive displacement chamber and turbine chamber can all be replaced quickly and easily with the meter in line.

**Maintenance:** SRH Compound Meters should be tested periodically to insure proper operation. A test plug is conveniently located on top of the maincase for field testing. Factory testing, repair and meter exchange programs are available.

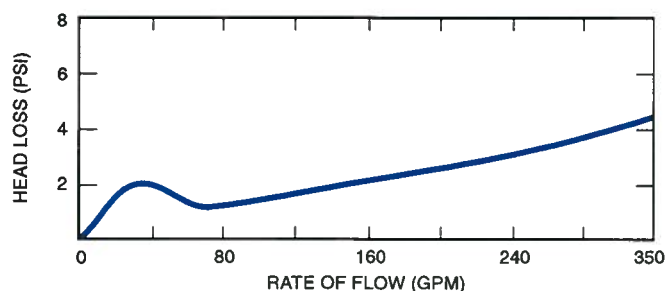
### Specifications

<b>SERVICE</b>	Measurement of cold water up to 80°F (27°C), horizontal installations with flow in one direction only.
<b>OPERATING RANGE</b>	1/2 to 350 gpm (.11 to 72.6 m <sup>3</sup> /h)
<b>ACCURACY (except at crossover)</b>	100% ± 1.5% of actual thruput
<b>ACCURACY AT CROSSOVER</b>	95% minimum
<b>LOW FLOW</b>	95% minimum at 1/2 gpm (.11 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	4.3 psi at 350 gpm (.30 bar at 79 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.34 bar)
<b>FLANGE</b>	3" Round, ANSI Class 125
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.
<b>METER REGISTRATION</b>	100,000,000 gallons 100 gallons/sweep hand revolution 10,000,000 cubic feet 10 cubic feet/sweep hand revolution 1,000,000 m <sup>3</sup> 1.0 m <sup>3</sup> /sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Bypass Chamber—Rocksyn® (Bronze optional) Turbine Chamber—Synthetic Polymer (Bronze optional) Piston—Synthetic Polymer Turbine—Polypropylene Valve—Bronze Test Plug—2" Tapered Pipe Threads (test nipple and valve optional) Trim—Stainless Steel

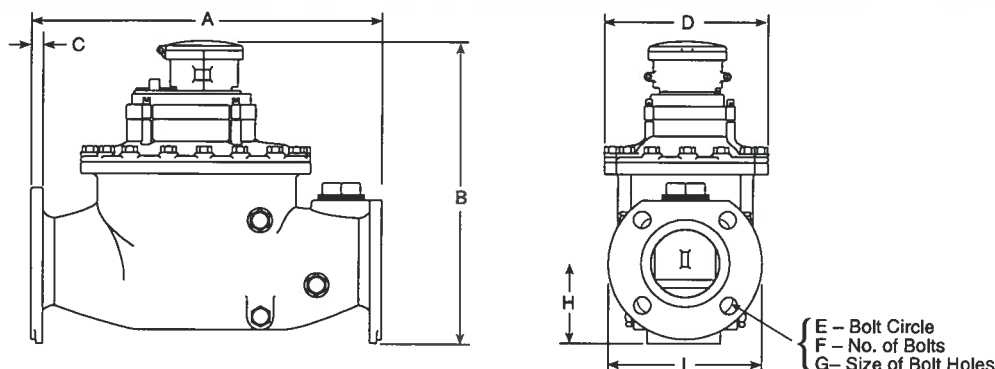
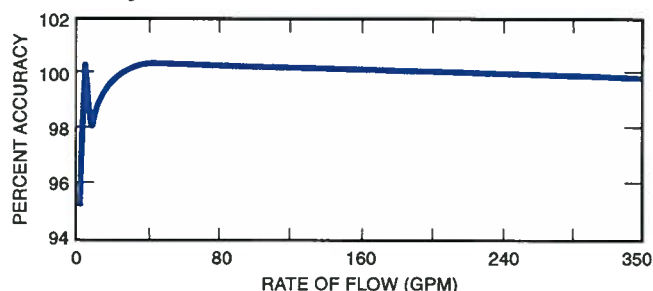
## AWWA Class II – Single Register High-Performance Compound Meter

Size 3" (DN 80mm)

**Head Loss Curve**



**Accuracy Curve**



Meter and Pipe Size	Dimensions									Net Weight	Shipping Weight
	A	B	C	D	E	F	G	H	I		
3"	17"	15-5/16"	3/4"	8-1/8"	6"	4	3/4"	4"	7-1/2"	70 lbs.	75 lbs.
DN 80mm	432mm	389mm	19mm	206mm	153mm	4	19mm	102mm	191mm	32 kg	34 kg

## Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

**The TouchRead® Automated Meter Reading and Billing System**—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

**PhonRead® AMR**—is a reliable telephone based call-in system that does not require batteries for operation. It also does not require equipment to be installed at telephone company facilities. PhonRead Meter Interface

Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

**RadioRead® AMR**—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

**MultiRead® Port Expanders**—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

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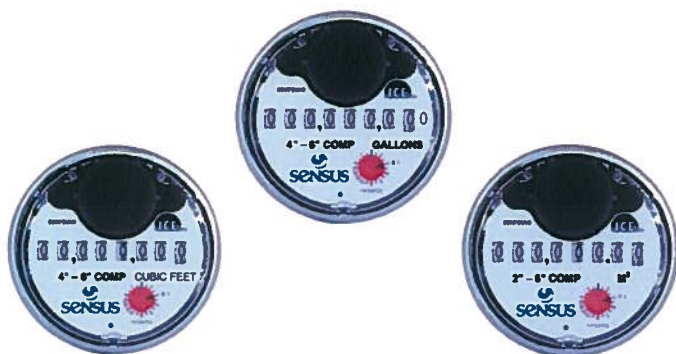




# Compound Meters

## AWWA Class II – Single Register High-Performance Compound Meter

Size 4" (DN 100mm)



Intelligent Communications Encoder (ICE) Register



4" SRH Compound Meter

### Description

**Application:** The 4" SRH Compound Meter is designed specifically for use in cold water services where flows vary from the very large to the very small. Typical applications are apartment dwellings, office buildings, hotels, schools and smaller manufacturing facilities.

**Conformance To Standards:** SRH Compound Meters comply with ANSI/AWWA Standard C702 Class II (most recent revision). Each meter is performance tested to insure compliance.

**Construction:** The SRH Compound Meter is essentially two meters within a single bronze housing. Low flows are measured through the piston type positive displacement measuring chamber. High flows through the turbine chamber. Flows through the measuring chambers are controlled by a bronze swing action valve. The measurements of the two chambers are coordinated and recorded on a single billing register.

**Coordinator:** A separate, sealed compartment contains the reduction gearing and over-riding clutches for both chambers in one module. The compartment is oil-filled for long life and maintenance-free operation. Separate change gears for calibrating the measuring chambers are located on top of the module for easy access.

**Magnetic Drive Couplings:** The motion of the measuring chambers is transferred to the sealed coordinator and single totalizing register through magnetic couplings. This allows all reduction gearing to be out of the water. Also, the turbine's shaft is magnetically suspended, causing it to be essentially weightless in water.

**Modular Design:** The hermetically sealed register, coordinator module, positive displacement chamber and turbine chamber can all be replaced quickly and easily with the meter in line.

**Maintenance:** SRH Compound Meters should be tested periodically to insure proper operation. A test plug is conveniently located on top of the maincase for field testing. Factory testing, repair and meter exchange programs are available.

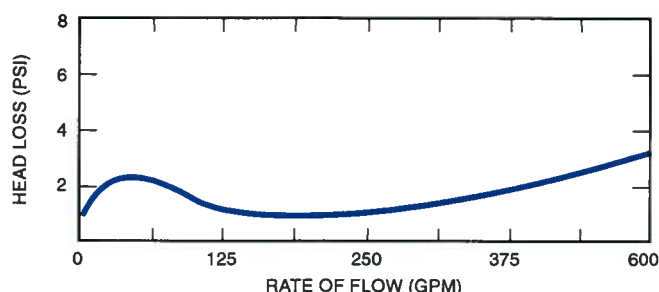
### Specifications

<b>SERVICE</b>	Measurement of cold water up to 80°F (27°C), horizontal installations with flow in one direction only.
<b>OPERATING RANGE</b>	3/4 to 600 gpm (.15 to 114 m³/h)
<b>ACCURACY (except at crossover)</b>	100% ± 1.5% of actual thruput
<b>ACCURACY AT CROSSOVER</b>	95% minimum
<b>LOW FLOW</b>	95% minimum at 3/4 gpm (.15 m³/h)
<b>PRESSURE LOSS</b>	3.5 psi at 600 gpm (.24 bar at 136 m³/h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.34 bar)
<b>FLANGE</b>	4" Round, ANSI Class 125
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.
<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 1,000,000 m³ 1.0 m³/sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Bypass Chamber—Rocksyn® (Bronze optional) Turbine Chamber—Synthetic Polymer (Bronze optional) Piston—Synthetic Polymer Turbine—Polypropylene Valve—Bronze Test Plug—2" Tapered Pipe Threads (test nipple and valve optional) Trim—Stainless Steel

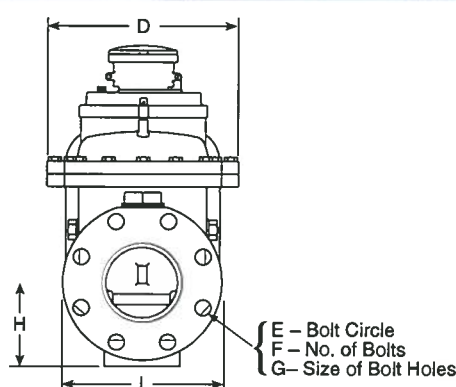
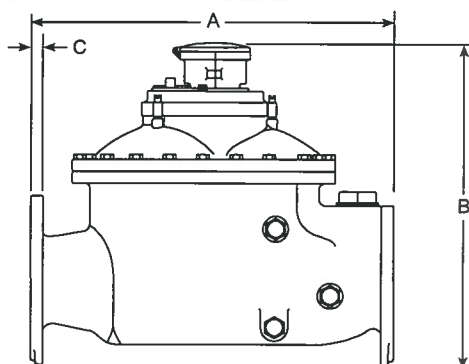
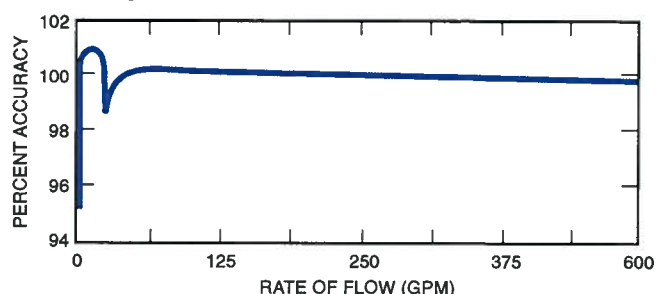
## AWWA Class II – Single Register High-Performance Compound Meter

Size 4" (DN 100mm)

### Head Loss Curve



### Accuracy Curve



Meter and Pipe Size	Dimensions									Net Weight	Shipping Weight
	A	B	C	D	E	F	G	H	I		
4"	20"	17-3/4"	11/16"	10-5/8"	7-1/2"	8	3/4"	4-3/4"	9"	128 lbs.	133 lbs.
DN 100mm	508mm	451mm	17mm	270mm	190mm	8	19mm	121mm	229mm	58 kg	60.3 kg

## Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

**The TouchRead® Automated Meter Reading and Billing System**—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

**PhonRead® AMR**—is a reliable telephone based call-in system that does not require batteries for operation. It also does not require equipment to be installed at telephone company facilities. PhonRead Meter Interface

Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

**RadioRead® AMR**—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

**MultiRead® Port Expanders**—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

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## Series "W" Turbo Meters

### Model W-1000 DRS

Bronze Magnetic Drive Flanged Ends Size 4" (DN 100mm)



Intelligent Communications Encoder (ICE) Register



W-1000 DRS Turbo Meter

### Description

**Model:** W-1000 DRS Turbo Meter is based on the turbine principle of measurement; its operating range is from 15 to 1000 gallons per minute (3.4 to 225 m<sup>3</sup>/h) with registration accuracy of 100% ± 1.5% of actual thruput.

**Conformance To Standards:** Sensus Turbo Meters comply with ANSI/AWWA Standard C701 (most recent revision). Each meter is performance tested to insure compliance.

**Performance:** The meter's unique principle of measurement assures extended accuracy life. The W-1000 DRS has no restrictions as to sustained flow rates within its operating range. The design permits continuous operation up to its rated maximum flow capacity, without affecting long term accuracy or causing undue wear.

**Construction:** The meter consists of two basic assemblies—the maincase and the measuring chamber. Straightening vanes in the maincase minimize the swirl upstream of the meter so as to direct the flow evenly to the rotor. The measuring chamber assembly includes the rotor, adjusting vane (for calibration) and sealed Direct Reading (DR) register.

**Magnetic Drive:** The Right Angle Magnetic Drive eliminates conventional worm or miter gears normally required for horizontally mounted rotors or turbine measuring elements. Registration is accomplished by combining the magnetic actions of a driver magnet (embedded in the rear face of the rotor), a three-legged flux carrier and a cylindrical follower magnet attached to the gear train shaft inside the register's magnet well. Water flowing through the meter causes the rotor (with magnet) to turn; as one of the magnet poles passes one of the flux carrier legs, the magnetic force is transmitted through the flux carrier leg to the follower magnet, causing the register shaft to rotate. The only moving part in water is the rotor assembly.

**Rotor:** The thermoplastic rotor with graphite bearing rotates on a chrome plated stainless steel shaft. The rotor assembly is virtually weightless in water, thus adding to bearing life.

**Maintenance:** The measuring chamber and straightening vanes can be removed, repaired and/or replaced without disturbing the maincase in the line. A spare chamber can be utilized in the event maintenance is required. Cover plates are also available to keep the line in service while the measuring chamber is repaired and recalibrated. A test outlet is provided in the outlet end for ease of flushing or accuracy testing. Factory testing, repair and measuring chamber exchange programs are available.

**Strainer:** The Model W-1000 DRS Turbo Meter is designed with an integral "V" shaped stainless steel strainer built into its inlet end. A removable cover plate permits easy access to the strainer for routine cleaning.

### Specifications

<b>SERVICE</b>	Measurement of potable cold water with flow in one direction only.
<b>OPERATING RANGE</b>	Continuous Flows: 15 to 1000 gpm (3.4 to 225 m <sup>3</sup> /h) Intermittent Flows: 1250 gpm max. (285 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW</b>	95% at 10 gpm (2.3 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	6.3 psi at 1000 gpm (.4 bar at 225 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>FLANGE</b>	4" U.S. ANSI B 16.1 Class 125. Optional drillings, if specified, British Standard B.S. 10 or metric standard ISO R2084
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.
<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 1,000,000 m <sup>3</sup> 1 m <sup>3</sup> /h sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Measuring Chamber—Thermoplastic Straightening Vanes—Thermoplastic Rotor—Thermoplastic Radial Bearing—Graphite Trim—Stainless Steel Thrust Bearings—Tungsten Carbide Magnets—Ceramic Strainer Screen—Stainless steel Strainer Cover—Bronze Test Plug—2" Tapered Pipe Threads



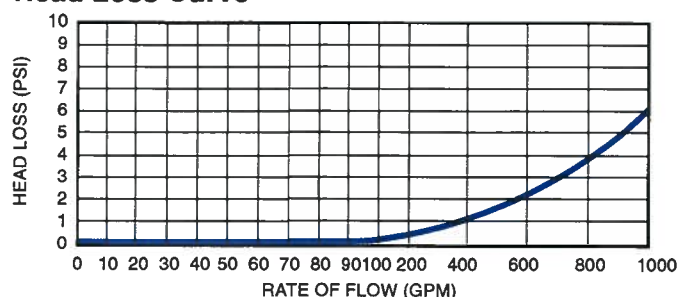
# Series "W" Turbo Meters

TM-8

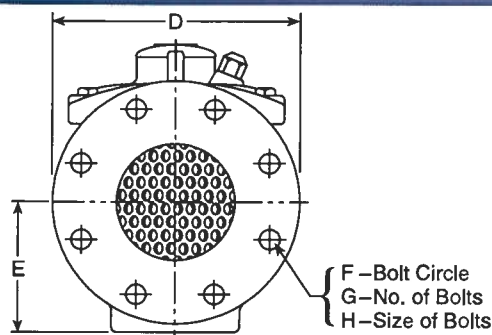
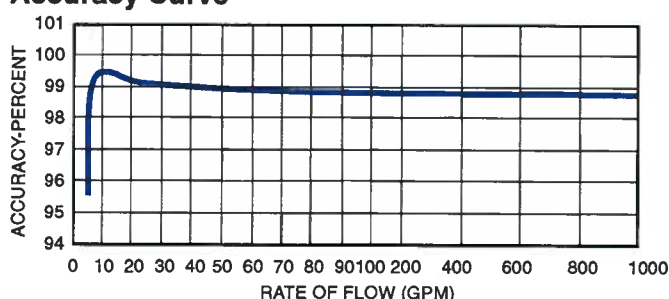
## Model W-1000 DRS

Bronze Magnetic Drive Flanged Ends Size 4" (DN 100mm)

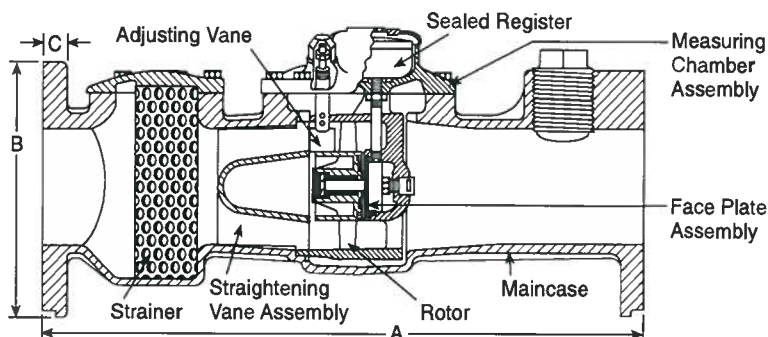
**Head Loss Curve**



**Accuracy Curve**



Direction of Flow



Meter and Pipe Size	Normal Operating Range GPM Minimum Maximum		Dimensions									Net Weight	Shipping Weight
			Connections	A	B	C	D	E	F	G	H		
4" DN 100mm	15 3.4m³/h	1000Ⓢ 225m³/h	Flanged	23"	10-7/8"	7/8"	9"	4-3/4"	7-1/2"	8	5/8"	77 lbs.	85 lbs.
				584mm	227mm	22mm	229mm	121mm	191mm	8	16mm	35 kg	39 kg

① For continuous flows; 1250 GPM (285m<sup>3</sup>/h) maximum for intermittent flows.

## Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

**The TouchRead® Automated Meter Reading and Billing System**—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

**PhonRead® AMR**—is a reliable telephone based call-in system that does not require batteries for operation. It also does not require equipment to be installed at telephone company facilities. PhonRead Meter Interface

Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

**RadioRead® AMR**—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

**MultiRead® Port Expanders**—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

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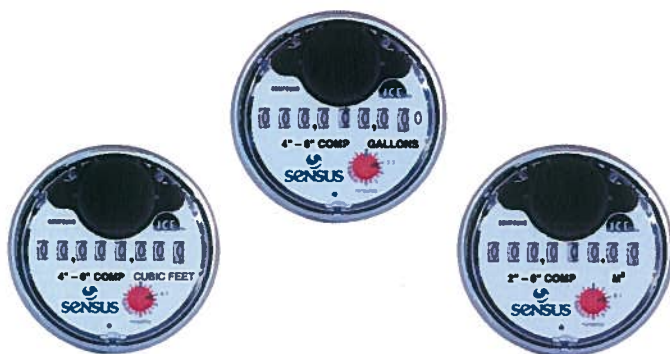
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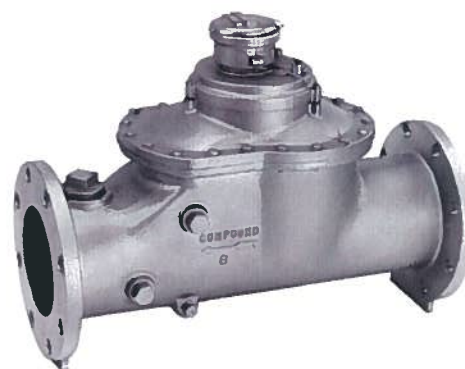
# Compound Meters

## AWWA Class II – Single Register High-Performance Compound Meter

Size 6" (DN 150mm)



Intelligent Communications Encoder (ICE) Register



6" SRH Compound Meter

### Description

**Application:** The 6" SRH Compound Meter is designed specifically for use in cold water services where flows vary from the very large to the very small. Typical applications are apartment dwellings, office buildings, hotels, schools and smaller manufacturing facilities.

**Conformance To Standards:** SRH Compound Meters comply with ANSI/AWWA Standard C702 Class II (most recent revision). Each meter is performance tested to insure compliance.

**Construction:** The SRH Compound Meter is essentially two meters within a single bronze housing. Low flows are measured through the piston type positive displacement measuring chamber. High flows through the turbine chamber. Flows through the measuring chambers are controlled by a bronze swing action valve. The measurements of the two chambers are coordinated and recorded on a single billing register.

**Coordinator:** A separate, sealed compartment contains the reduction gearing and over-riding clutches for both chambers in one module. The compartment is oil-filled for long life and maintenance-free operation. Separate change gears for calibrating the measuring chambers are located on top of the module for easy access.

**Magnetic Drive Couplings:** The motion of the measuring chambers is transferred to the sealed coordinator and single totalizing register through magnetic couplings. This allows all reduction gearing to be out of the water. Also, the turbine's shaft is magnetically suspended, causing it to be essentially weightless in water.

**Modular Design:** The hermetically sealed register, coordinator module, positive displacement chamber and turbine chamber can all be replaced quickly and easily with the meter in line.

**Maintenance:** SRH Compound Meters should be tested periodically to insure proper operation. A test plug is conveniently located on top of the maincase for field testing. Factory testing, repair and meter exchange programs are available.

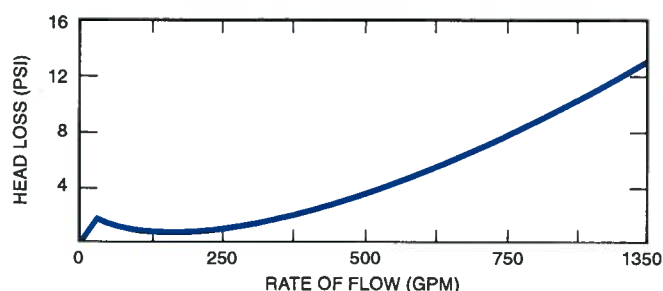
### Specifications

<b>SERVICE</b>	Measurement of cold water up to 80°F (27°C), horizontal installations with flow in one direction only.
<b>OPERATING RANGE</b>	1-1/2 to 1350 gpm (.35 to 225 m <sup>3</sup> /h)
<b>ACCURACY (except at crossover)</b>	100% ± 1.5% of actual thruput
<b>ACCURACY AT CROSSOVER</b>	95% minimum
<b>LOW FLOW</b>	95% minimum at 1-1/2 gpm (.35 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	14.3 psi at 1350 gpm (.99 bar at 307 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.34 bar)
<b>FLANGE</b>	6" Round, ANSI Class 125
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.
<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 1,000,000 m <sup>3</sup> 1.0 m <sup>3</sup> /sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Bypass Chamber—Rocksyn® (Bronze optional) Turbine Chamber—Synthetic Polymer (Bronze optional) Piston—Synthetic Polymer Turbine—Polypropylene Valve—Bronze Test Plug—2" Tapered Pipe Threads (test nipple and valve optional) Trim—Stainless Steel

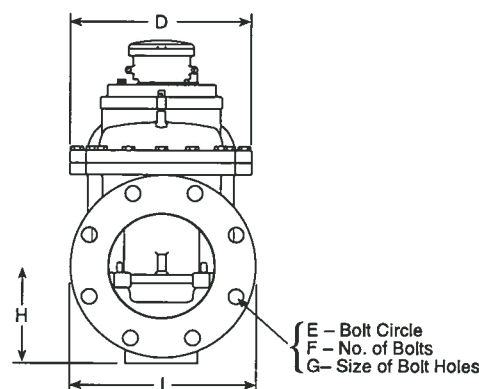
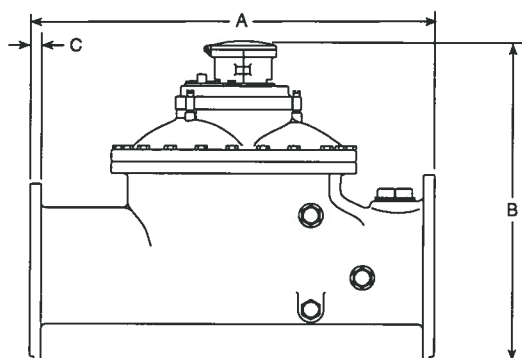
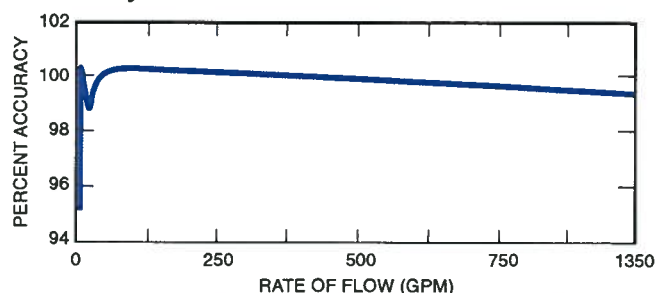
# AWWA Class II – Single Register High-Performance Compound Meter

Size 6" (DN 150mm)

**Head Loss Curve**



**Accuracy Curve**



Meter and Pipe Size	Dimensions									Net Weight	Shipping Weight
	A	B	C	D	E	F	G	H	I		
6"	24"	18-3/4"	7/8"	11"	9-1/2"	8	7/8"	5-1/4"	11"	155 lbs.	160 lbs.
DN 150mm	610mm	476mm	22mm	279mm	242mm	8	22mm	146mm	279mm	70 kg	72.5 kg

## Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

**The TouchRead® Automated Meter Reading and Billing System**—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

**PhonRead® AMR**—is a reliable telephone based call-in system that does not require batteries for operation. It also does not require equipment to be installed at telephone company facilities. PhonRead Meter Interface

Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

**RadioRead® AMR**—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

**MultiRead® Port Expanders**—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

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# Series "W" Turbo Meters

## Model W-2000 DRS

Bronze Magnetic Drive Flanged Ends Size 6" (DN 150mm)



Intelligent Communications Encoder (ICE) Register



W-2000 DRS Turbo Meter

### Description

**Model:** W-2000 DRS Turbo Meter is based on the turbine principle of measurement; its operating range is from 30 to 2000 gallons per minute (6.8 to 450 m<sup>3</sup>/h) with registration accuracy of 100% ± 1.5% of actual thruput.

**Conformance To Standards:** Sensus Turbo Meters comply with ANSI/AWWA Standard C701 (most recent revision). Each meter is performance tested to insure compliance.

**Performance:** The meter's unique principle of measurement assures extended accuracy life. The W-2000 DRS has no restrictions as to sustained flow rates within its operating range. The design permits continuous operation up to its rated maximum flow capacity, without affecting long-term accuracy or causing undue wear.

**Construction:** The meter consists of two basic assemblies—the maincase and the measuring chamber. Straightening vanes in the maincase minimize the swirl upstream of the meter so as to direct the flow evenly to the rotor. The measuring chamber assembly includes the rotor, adjusting vane (for calibration) and sealed Direct Reading (DR) register. The meter includes a built-in strainer with plugged, inlet flush outlets and test plug.

**Magnetic Drive:** The patented Right Angle Magnetic Drive eliminates conventional worm or miter gears normally required for horizontally mounted rotors or turbine measuring elements. Registration is accomplished by combining the magnetic actions of a driver magnet (embedded in the rear face of the rotor), a three-legged flux carrier and a cylindrical follower magnet attached to the gear train shaft inside the register's magnet well. Water flowing through the meter causes the rotor (with magnet) to turn. As one of the magnet poles passes one of the flux carrier legs, the magnetic force is transmitted through the flux carrier leg to the follower magnet, causing the register shaft to rotate. The only moving part in water is the rotor assembly.

**Rotor:** The thermoplastic rotor with graphite bearing rotates on a chrome plated stainless steel shaft. The rotor assembly is virtually weightless in water, thus adding to bearing life.

**Maintenance:** The measuring chamber and straightening vanes can be removed, repaired and/or replaced without disturbing the maincase in the line. A spare chamber can be utilized in the event maintenance is required. Cover plates are also available to keep the line in service while the measuring chamber is repaired and recalibrated. Opposing plugged flush outlets are located on the inlet side of the strainer screen so debris may be discharged efficiently without removing the screen or disturbing the measuring chamber. A test plug is conveniently located on top of the maincase for field testing. Factory testing, repair and measuring chamber exchange programs are available. See Sensus data bulletin TM-699 for details.

### Specifications

<b>SERVICE</b>	Measurement of potable cold water with flow in one direction only.
<b>OPERATING RANGE</b>	Continuous Flows: 30 to 2000 gpm (6.8 to 450 m <sup>3</sup> /h) Intermittent Flows: 2500 gpm max. (562 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ± 1.5% of actual thruput
<b>LOW FLOW</b>	95% at 20 gpm (4.56 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	6.2 psi at 2000 gpm (.4 bar at 450 m <sup>3</sup> /h)
<b>MAXIMUM OPERATING PRESSURE</b>	150 psi (10.0 bar)
<b>FLANGE</b>	6" U.S. ANSI B-16.1 Class 125. Optional drillings, if specified, British Standard B.S. 10 or Metric Standard ISO R2084
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.
<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 1,000,000 m <sup>3</sup> 1 m <sup>3</sup> /h sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Measuring Chamber—Thermoplastic Straightening Vanes—Thermoplastic Rotor—Thermoplastic Radial Bearing—Graphite Trim—Stainless Steel Thrust Bearings—Tungsten Carbide Magnets—Ceramic Strainer Screen—Stainless Steel Strainer Cover—Bronze Strainer Flush Plugs (2)—1" Tapered Pipe Threads Test Plug—2" Tapered Pipe Threads

**Strainer:** The Model W-2000 DRS Turbo Meter is designed with an integral "V" shaped stainless steel strainer built into its inlet end. A removable cover plate permits easy access to the strainer for routine cleaning.

**Electronic Registers:** Impulse Contact Registers and High Speed Pickup Registers are available for use with Act-Pak<sup>®</sup> Instruments for remote monitoring and control, based on flow rate and/or totalization. See data sheets E-1112 and E-1116.

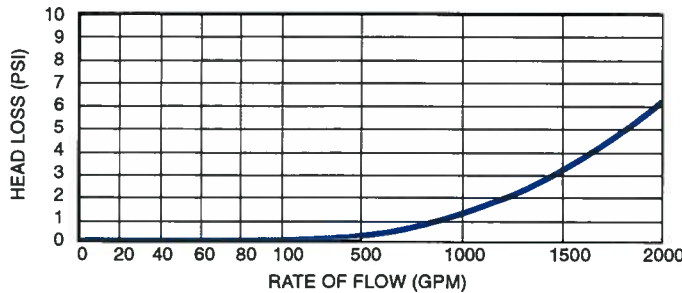
# Series "W" Turbo Meters

TM-7

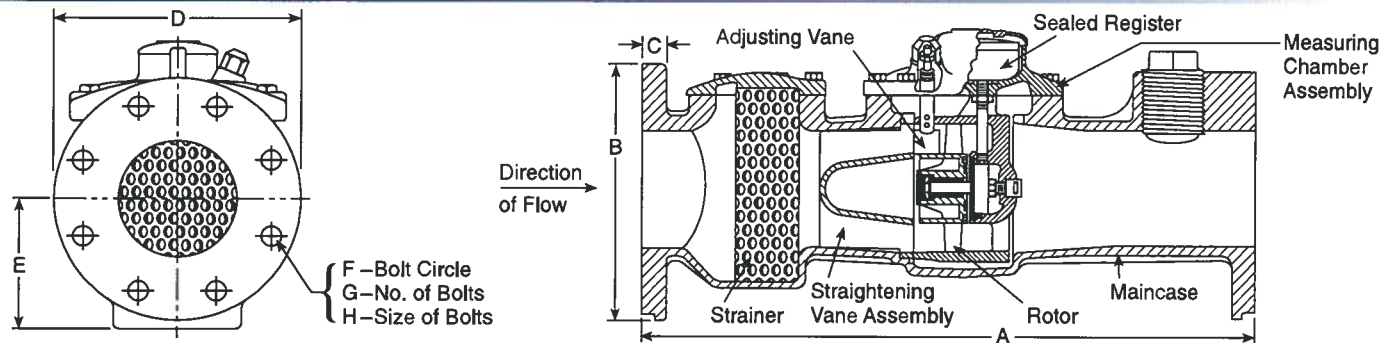
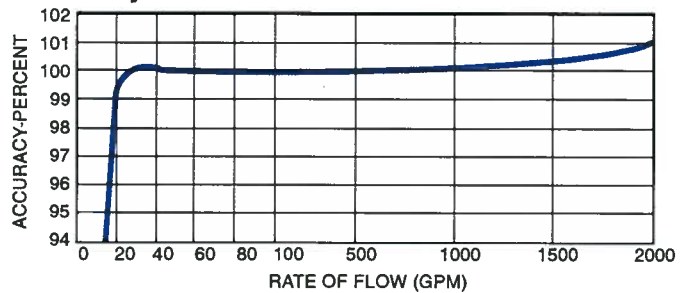
## Model W-2000 DRS

Bronze Magnetic Drive Flanged Ends Size 6" (DN 150mm)

**Head Loss Curve**



**Accuracy Curve**



Meter and Pipe Size	Normal Operating Range GPM Minimum Maximum	Dimensions									Net Weight	Shipping Weight
		Connections	A	B	C	D	E	F	G	H		
6" DN 150mm	30 6.8m <sup>3</sup> /h 2000 <sup>①</sup> 450m <sup>3</sup> /h	Flanged	27" 685.8mm	13" 227mm	7/8" 22mm	11" 229mm	5-3/4" 121mm	9-1/2" 191mm	8 8	3/4" 16mm	140 lbs. 63 kg	165 lbs. 74 kg

① For continuous flows; 1250 GPM (285m<sup>3</sup>/h) maximum for intermittent flows.

## Remote Reading Systems

For use with all sizes of Sensus Water Meters

All Sensus AMR systems work with the same absolute encoder. Electronic Communications Registers (ECR), enabling the utility to mix and match or easily move from one system to another without changing registers for each.

**The TouchRead® Automated Meter Reading and Billing System**—is a multipurpose encoder remote system suitable for indoor and/or outdoor use. The ECR Register uses a wired connection between the meter and an outside remote for inside set meters—or a pitlid mounted module, enabling underground meters to be read automatically without opening the meter box or vault. All wired connections and terminals of the TouchRead PitLid (TR/PL) modules and registers are fully sealed at the factory using a special process to ensure protection from water infiltration. The connection terminals of ECR/WP registers are also factory sealed.

Meters equipped for TouchRead System reading can be read with a visual reading device, stand alone AutoGun, and/or reading gun with an AutoRead HandHeld Device. For more information on TouchRead System equipment refer to bulletins AMR-TR, AMR-401, AMR-403, AMR-312 and EXSUMHH.

**PhonRead® AMR**—is a reliable telephone based call-in system that does not require batteries for operation. It also does not require equipment to be installed at telephone company facilities. PhonRead Meter Interface

Units (MIU) automatically call "in" to the utility office for transferring meter reading data from the meter site to a PC. PhonRead is a transparent AMR system that does not interfere with customers' telephone service. For more information refer to bulletins AMR-PR and AMR-302.

**RadioRead® AMR**—uses superior Direct Sequence Spread Spectrum modulation to provide reliable, safe and virtually interference free radio-based transmission of reading data from underground or inside-set meters that are equipped with Meter Transceiver Units (MXU). A choice of meter reading options is available. A radio frequency hand-held device (RF-HHD) can be used by a meter reader on foot. The RF-HHD can also be used to collect readings from TouchRead equipped meters, or for manual meter reading entries. A more powerful Vehicle Transceiver Unit (VXU) can be used in any car or truck to read meters while on the move. (A dedicated meter reading vehicle is not required.) For more information refer to bulletins AMR-RR, AMR-301 and AMR-303, and AMR-401.

**MultiRead® Port Expanders**—can provide the capability to connect multiple ECR equipped meters to a single PhonRead MIU or RadioRead MXU to save the utility time and money for installations such as apartment complexes and shopping centers. Refer to bulletin AMR-305, AMR-306 and AMR-308.

**AUTHORIZED SENSUS DISTRIBUTOR**



P.O. Box 487 • 450 N. Gallatin Avenue  
Uniontown, PA 15401  
1-800-METER-IT • 1-800-638-3748

Fax: Direct to Factory  
Local: 724-439-7729 • Toll Free: 1-800-888-2403

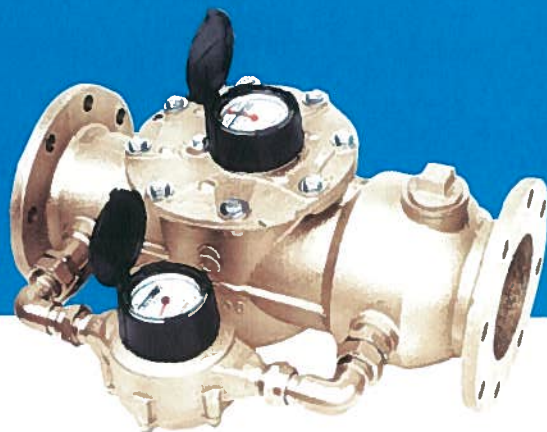
www.sensus.com (select "North America Water")  
Email: h2oinfo@sensus.com



# C3000 Compound Meter

## Bronze, Magnetic Drive, Round Flanged Ends

Size 6"



Size	6"
95%-101% Accuracy GPM	3/4
98.5%-101.5% Accuracy GPM	1 1/2 - 2500
Continuous Flow GPM	1560
Maximum Flow GPM	2500
Operating Pressure psi	150
Operating Temperature °F	120

Sweep Hand Registers	Turbine	Bypass
US Gallons	1000	10
Cubic Feet	100	1
Cubic Meters	10	1/10
Imperial Gallons	100	10

Capacity of Registers	Turbine	Bypass
US Gallons (millions)	1000	100
Cubic Feet (millions)	100	10
Cubic Meters (millions)	10	1
Imperial Gallons (millions)	1000	100

**Register Type** Permanently sealed direct reading registers.

### Materials

Main Case	Bronze
Top Cover Plate	Bronze
Case Bolts	Stainless Steel
Measuring Element	Polyphenylene Oxide
Rotor	Polypropylene
Rotor Bushings	PTFE Compound
Rotor Thrust Bearing	Ceramic Jewel
Rotor Spindle	Tungsten Carbide
Undergearing	Polyacetal Resin
Changeover Valve	Polymer, Bronze, Stainless Steel & Rubber
Bypass Meter	Bronze
Measuring Chamber	Compounded Thermoplastic
Register Lens	Tempered Glass
Register Housing & Lid	Polymer or Bronze
Register Can	90% Copper Alloy
Body O-Rings	Rubber & Nitrile

**Operation.** The C3000 Compound Meter is designed for installations where large variations in flow rate can be expected. These flow ranges are measured by utilizing the low flow capability of a positive displacement meter and the higher flow efficiency of a Class II turbine meter. The small meter is a standard C700. The measuring element of the large meter is a standard T3000 turbine meter. Located on the downstream side of the turbine measuring chamber, a changeover valve operates on differential pressure. Before the valve opens, all flow is directed through the C700 bypass meter. After the valve opens, flow goes through both measuring chambers.

**Compliance to Standards.** The C3000 Compound Meter fully complies with the American Water Works Association Standard C702 as most recently revised.

**Installation.** The meter must be installed in a clean pipeline, free from any foreign materials. Install the meter with direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in horizontal or inclined lines. The AWWA M6 manual recommends 10



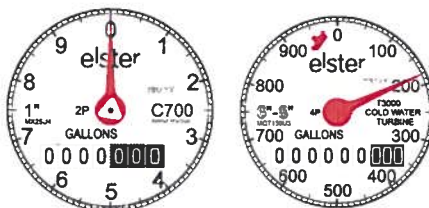
pipe diameters upstream and 5 pipe diameters downstream of straight pipe for optimal accuracy of all inferential type flowmeters. It is recommended that a plate strainer be used to protect the turbine and help reduce the effects of turbulence. Optional bypass trim valves are available to facilitate in-line bypass meter replacement while under pressure.

**Application.** The meter is for use with POTABLE COLD WATER up to 120°F (50°C) and working pressures up to 150 psi. The meter will perform with accuracy registration of 100%  $\pm$  1% within its normal flows of 1fi-2500 GPM. Both pressure loss and accuracy tests are made before shipment. No adjustments are necessary before installation.

**Construction.** The meter consists of a main case, turbine measuring element, changeover valve, main case cover, oscillating piston bypass meter and magnetically driven register assemblies. Both the main case and bypass meter are cast in bronze with raised characters showing model, size and direction of flow. The main case has a throated inlet. A case dowel pin is inserted for locating the bronze cover plate. There are tapped bosses for 3/4" drain and 2" test plugs. The measuring element assembly consists of the rotor, straightening vanes, accuracy regulator, spindles and gears, filters and undergear assembly. The measuring element is attached to the underside of the main cover with four stainless steel screws and washers, one insert of which is placed eccentrically in the cover. The internal regulator assembly is interconnected to an external regulator shaft located on top of the cover, allowing meter calibration without depressurizing the test bench or meter service. The main case and cover are assembled with an O-ring gasket and stainless steel bolts. The bypass consists of 1" piping and a 1" meter with an oscillating piston measuring chamber and a polymer strainer. A non-return valve installed in the meter's bypass arm, downstream of the bypass meter, prevents backflow from the high flow chamber being registered on the bypass meter. Each register assembly is secured with a screw and is protected by a hinged lid bearing the same serial number.

**Register.** Each register is contained within a 90% copper seamless can which is oven-cured at 150°F for 90 minutes to eliminate condensation. The 1/4" true tempered glass lens is domed and secured with an "L" shaped gas-

ket, then roll sealed. To assure easy reading, the totalizer wheels are large and color coded. The applicable size, model, registration, part number and date code are printed on the calibrated dial face. Moving clockwise during operation, extra thin sweep hands do not interfere with meter reading, and the low-flow indicator will detect plumbing leaks.



**Connections.** This meter has 8-bolt round flanged end connections. Both bronze and cast iron companion flanges are available. The companion flanges are faced, drilled and tapped with ANSI B2.1 internal taper pipe thread.

**Maintenance.** The unitized turbine measuring element with integral straightening vanes can be removed, repaired or replaced without removing the main case from the service line. Blank cover plates are available for the utility's use. Pretested and calibrated turbine measuring elements with cover plates and registers are available for exchange or purchase. The C3000 may be repaired with standard T3000

and C700 parts available from our warehouses in the U.S. and Canada. In addition, Elster AMCO Water maintains a fully equipped and staffed repair facility in Ocala, Florida.

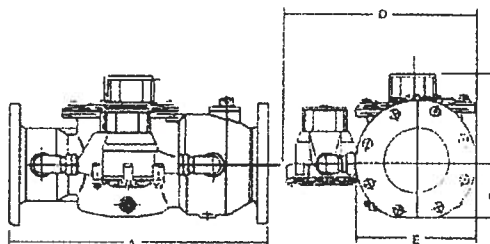
**Reading Options.** C3000 meters are available with Absolute Encoder and Digital register options to provide water usage output to the entire spectrum of electronic meter reading systems, giving flexibility to utilities implementing or upgrading reading technologies. Elster AMCO Water's Encoder and Digital registers interface to a variety of automated meter reading systems, allowing technology upgrade without register replacement.

#### Automatic Meter Reading (AMR).

Elster AMCO Water offers the full spectrum of RF technology alternatives - Walk-by, Drive-by and Fixed Network, to reduce reading cost beyond electronic meter reading, while further increasing personnel safety. RF Transmitters accept input from the Elster AMCO Water's Encoder or Digital Register for reliable measurement inputs. RF Systems from Elster AMCO Water are designed for reading both pit and inside set meter installations, and are to perform in the extremes of service conditions they will encounter.

#### Dimensions and Net Weight

Meter Size	Dimensions (Inches)					Weight (lbs.)
	A	B	C	D	E	
6"	24	8 1/8	5 5/16	17 9/16	11 3/16	145



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The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice. These products have been manufactured with current technology and in accordance with applicable AWWA Standards.

C3000-BZ-6/06-07

# Series “W” Turbo Meters

Model W-3500 DR

## Bronze Magnetic Drive Flanged Ends Size 8" (DN 200mm)

### DESCRIPTION

**Model:** W-3500 DR Turbo Meter is based on the turbine principle of measurement; its operating range is from 35 to 3500 gallons per minute (8 to 795 m<sup>3</sup>/h) with registration accuracy of 100%  $\pm$ 1.5% of actual thruput.

**Conformance to Standards:** Sensus Turbo Meters comply with ANSI/AWWA Standard C701 (most recent revision). Each meter is performance tested to insure compliance.

**Performance:** The meter's unique principle of measurement assures extended accuracy life. The W-3500 DR has no restrictions as to sustained flow rates within its operating range. The design permits continuous operation up to its rated maximum flow capacity, without affecting long term accuracy or causing undue wear.

**Construction:** The meter consists of two basic assemblies— the maincase and the measuring chamber. Straightening vanes in the maincase minimize the swirl upstream of the meter so as to direct the flow evenly to the rotor. The measuring chamber assembly includes the rotor, adjusting vane (for calibration) and sealed Direct Reading (DR) register.

**Magnetic Drive:** The Right Angle Magnetic Drive eliminates conventional worm or miter gears normally required for horizontally mounted rotors or turbine measuring elements. Registration is accomplished by combining the magnetic actions of a driver magnet (embedded in the rear face of the rotor), a three-legged flux carrier and a cylindrical follower magnet attached to the gear train shaft inside the register's magnet well. Water flowing through the meter causes the rotor (with magnet) to turn; as one of the magnet poles passes one of the flux carrier legs, the magnetic force is transmitted through the flux carrier leg to the follower magnet, causing the register shaft to rotate. The only moving part in water is the rotor assembly.

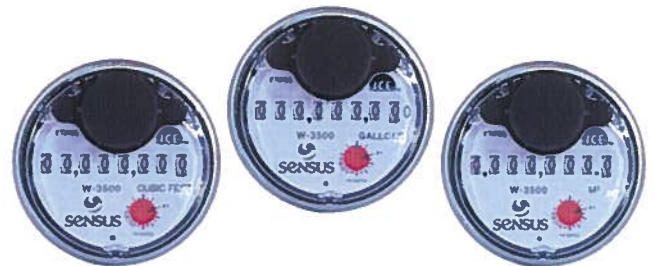
**Rotor:** The thermoplastic rotor with graphite bearing rotates on a chrome plated stainless steel shaft. The rotor assembly is virtually weightless in water, thus adding to bearing life.

**Maintenance:** The measuring chamber and straightening vanes can be removed, repaired and/or replaced without disturbing the maincase in the line. A spare chamber can be utilized in the event maintenance is required. Cover plates are also available to keep the line in service while the measuring chamber is repaired and recalibrated. Factory testing, repair and measuring chamber exchange programs are available.

**Strainer:** The meter comes equipped with an AWWA type strainer and must be installed immediately upstream of the meter. Sensus recommends the use of an approved strainer with this meter.



W-3500 DR Turbo Meter with AWWA Strainer



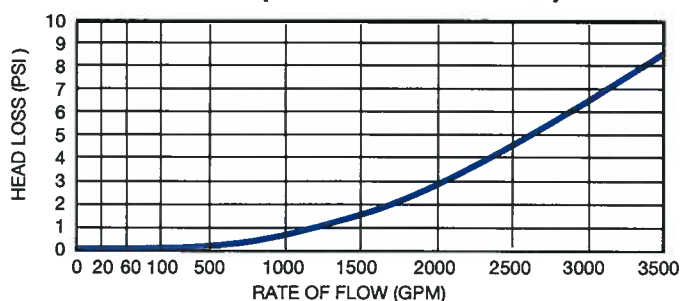
Intelligent Communications Encoder (ICE) Register

**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

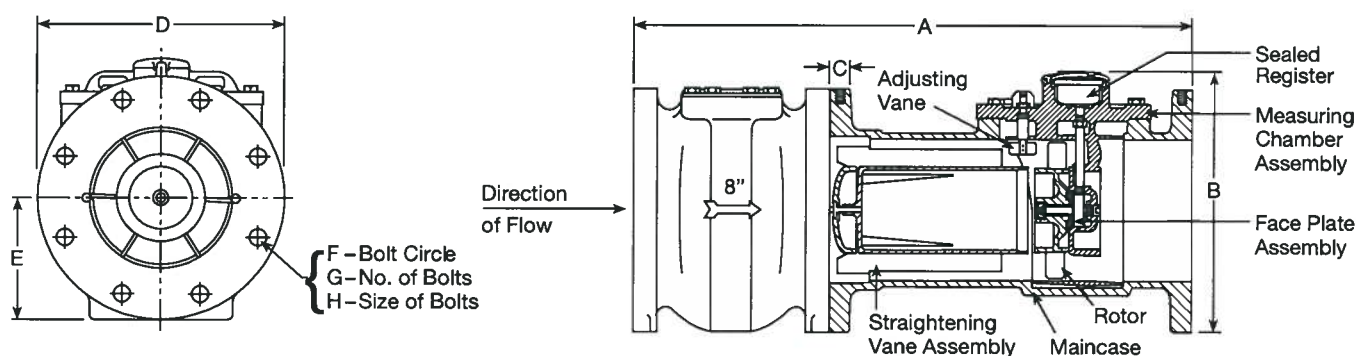
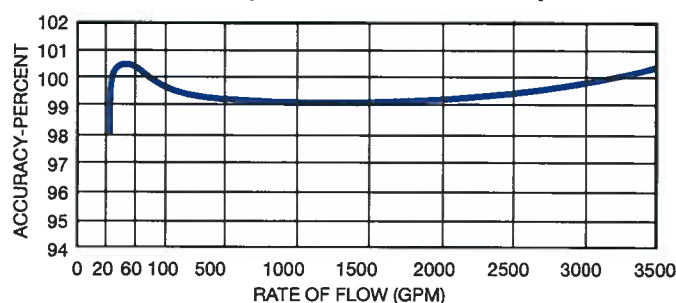
**Guarantee:** Sensus Turbo Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details or see Bulletin G-500.



Head Loss Curve (With AWWA Strainer)



Accuracy Curve (With AWWA Strainer)



## DIMENSIONS AND NET WEIGHTS

Meter and Pipe Size	Normal Operating Range	Connections	Dimensions								Net Weight	Shipping Weight
			A	B	C	D	E	F	G	H		
8"	35 gpm 3500 gpm <sup>1</sup>	Flanged	30-1/8"	15"	11/16"	13-1/2"	6-3/4"	11-3/4"	8	3/4"	305 lbs.	340 lbs.
DN 200mm	8 m <sup>3</sup> /hr 795 m <sup>3</sup> /hr		765mm	381mm	17mm	343mm	172mm	300mm	8	19mm	138 kg	154 kg

<sup>1</sup> For continuous flows; 4400 GPM (998m<sup>3</sup>/h) maximum for intermittent flows.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of potable cold water with flow in one direction only.
<b>OPERATING RANGE</b>	Continuous Flows: 35 to 3500 gpm (8 to 795 m <sup>3</sup> /h) Intermittent Flows: 4400 gpm max. (998 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ±1.5% of actual thruput
<b>LOW FLOW</b>	95% at 30 gpm (6.8 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	Meter and Strainer—8.3 psi at 3500 gpm (.6 bar at 800 m <sup>3</sup> /h)
<b>MAXIMUM CONTINUOUS OPERATION</b>	150 psi (10.0 bar)
<b>FLANGE</b>	8" U.S. ANSI B 16.1 Class 125. Optional drillings, if specified, British Standard B.S. 10 or metric standard ISO R2084
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.

<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 10,000,000 m <sup>3</sup> 10 m <sup>3</sup> /sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Measuring Chamber—Bronze Straightening Vanes—Stainless Steel Rotor—Thermoplastic Radial Bearing—Ceramic Trim—Stainless Steel Thrust Bearings—Tungsten Carbide Magnets—Ceramic
<b>STRAINER MATERIALS</b>	Body and Cover—Cast Iron Screen—Stainless Steel

# Series “W” Turbo Meters

Model W-5500 DR

## Bronze Magnetic Drive Flanged Ends Size 10” (DN 250mm)

### DESCRIPTION

**Model:** W-5500 DR Turbo Meter is based on the turbine principle of measurement; its operating range is from 55 to 5500 gallons per minute (12.5 to 1250 m<sup>3</sup>/h) with registration accuracy of 100%  $\pm$ 1.5% of actual throughput.

**Conformance to Standards:** Sensus Turbo Meters comply with ANSI/AWWA Standard C701 (most recent revision). Each meter is performance tested to insure compliance.

**Performance:** The meter’s unique principle of measurement assures extended accuracy life. The W-5500 DR has no restrictions as to sustained flow rates within its operating range. The design permits continuous operation up to its rated maximum flow capacity, without affecting long term accuracy or causing undue wear.

**Construction:** The meter consists of two basic assemblies— the maincase and the measuring chamber. Straightening vanes in the maincase minimize the swirl upstream of the meter so as to direct the flow evenly to the rotor. The measuring chamber assembly includes the rotor, adjusting vane (for calibration) and sealed Direct Reading (DR) register.

**Magnetic Drive:** The Right Angle Magnetic Drive eliminates conventional worm or miter gears normally required for horizontally mounted rotors or turbine measuring elements. Registration is accomplished by combining the magnetic actions of a driver magnet (embedded in the rear face of the rotor), a three-legged flux carrier and a cylindrical follower magnet attached to the gear train shaft inside the register’s magnet well. Water flowing through the meter causes the rotor (with magnet) to turn; as one of the magnet poles passes one of the flux carrier legs, the magnetic force is transmitted through the flux carrier leg to the follower magnet, causing the register shaft to rotate. The only moving part in water is the rotor assembly.

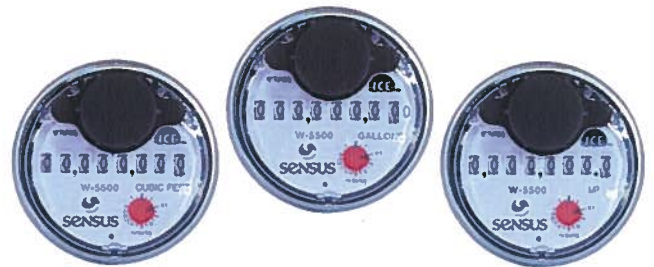
**Rotor:** The thermoplastic rotor with graphite bearing rotates on a chrome plated stainless steel shaft. The rotor assembly is virtually weightless in water, thus adding to bearing life.

**Maintenance:** The measuring chamber and straightening vanes can be removed, repaired and/or replaced without disturbing the maincase in the line. A spare chamber can be utilized in the event maintenance is required. Cover plates are also available to keep the line in service while the measuring chamber is repaired and recalibrated. Factory testing, repair and measuring chamber exchange programs are available.

**Strainer:** The meter comes equipped with an AWWA type strainer and must be installed immediately upstream of the meter. Sensus recommends the use of an approved strainer with this meter.



W-5500 DR Turbo Meter with AWWA Strainer

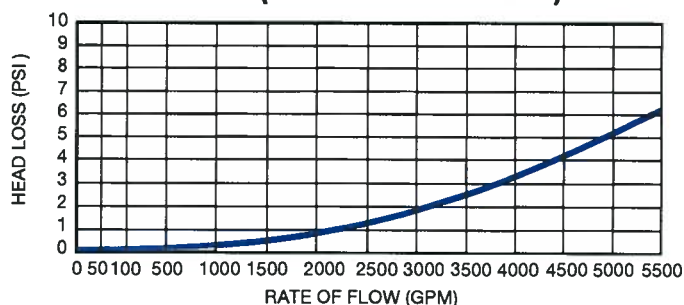


Intelligent Communications Encoder (ICE) Register

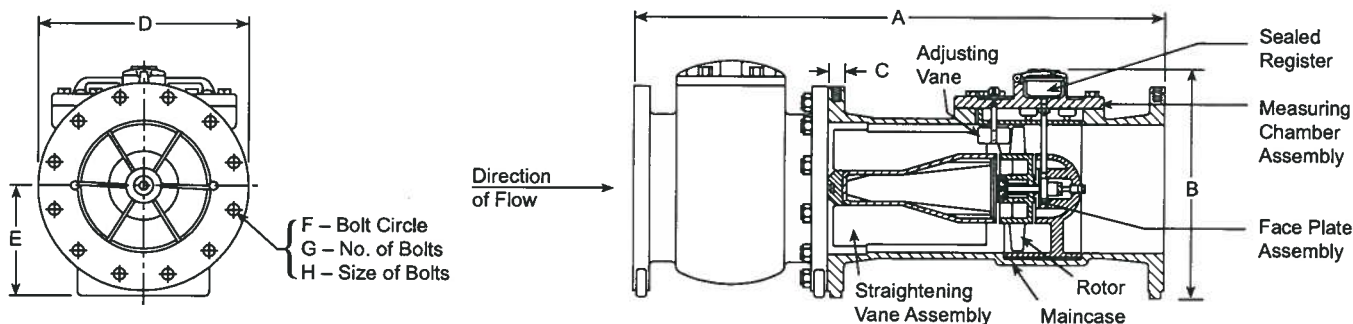
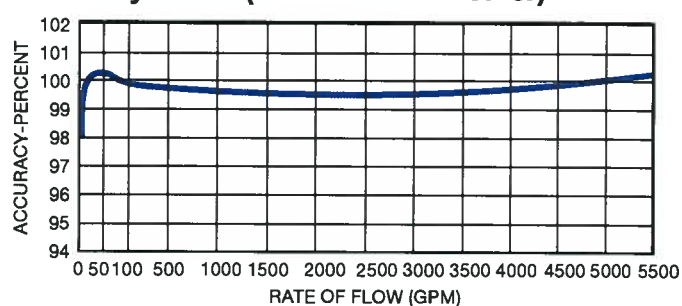
**AMR / AMI Systems:** Meters and encoders are compatible with current Sensus AMR/AMI systems.

**Guarantee:** Sensus Turbo Meters are backed by “The Sensus Guarantee.” Ask your Sensus representative for details or see Bulletin G-500.

Head Loss Curve (With AWWA Strainer)



Accuracy Curve (With AWWA Strainer)



## DIMENSIONS AND NET WEIGHTS

Meter and Pipe Size	Normal Operating Range	Connections	A	B	C	D	E	F	G	H	Net Weight	Shipping Weight
10"	55 gpm	Flanged	41-1/8"	19"	11/16"	16"	8-1/2"	14-1/4"	12	7/8"	590 lbs.	650 lbs.
DN 250mm	12.5 m <sup>3</sup> /hr		1045mm	485mm	17mm	406mm	216mm	362mm	12	22mm	268 kg	294 kg

<sup>1</sup> For continuous flows; 7000 GPM (1600m<sup>3</sup>/h) maximum for intermittent flows.

## SPECIFICATIONS

<b>SERVICE</b>	Measurement of potable cold water with flow in one direction only.
<b>OPERATING RANGE</b>	Continuous Flows: 55 to 5500 gpm (12.5 to 1250 m <sup>3</sup> /h) Intermittent Flows: 7000 gpm max. (1600 m <sup>3</sup> /h)
<b>ACCURACY</b>	100% ±1.5% of actual throughput
<b>LOW FLOW</b>	95% at 35 gpm (8 m <sup>3</sup> /h)
<b>PRESSURE LOSS</b>	Meter and Strainer—6.2 psi at 5500 gpm (.4 bar at 1250 m <sup>3</sup> /h)
<b>MAXIMUM CONTINUOUS OPERATION</b>	150 psi (10.0 bar)
<b>FLANGE</b>	10" U.S. ANSI B 16.1 Class 125. Optional drillings, if specified, British Standard B.S. 10 or metric standard ISO R2084
<b>REGISTER</b>	Hermetically Sealed Direct Reading Register with Low Flow Indicator. Remote reading unit optional.

<b>METER REGISTRATION</b>	1,000,000,000 gallons 1,000 gallons/sweep hand revolution 100,000,000 cubic feet 100 cubic feet/sweep hand revolution 10,000,000 m <sup>3</sup> 10 m <sup>3</sup> /sweep hand revolution
<b>MATERIALS</b>	Maincase—Bronze Measuring Chamber—Bronze Straightening Vanes—Stainless Steel Rotor—Thermoplastic Radial Bearing—Ceramic Trim—Stainless Steel Thrust Bearings—Tungsten Carbide Magnets—Ceramic
<b>STRAINER MATERIALS</b>	Body and Cover—Ductile Iron Screen—Bronze



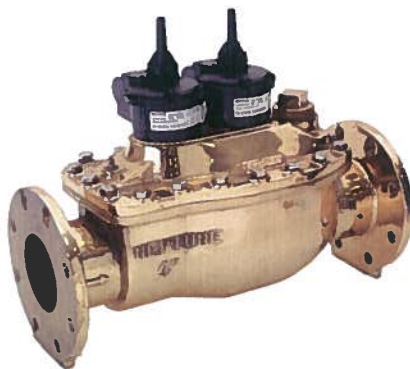
**NEPTUNE**  
TECHNOLOGY GROUP

## TRU/FLO® COMPOUND METER

SIZES: 2" HP, 3", 4", 6" AND 6" x 8"



TRU/FLO® meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.



All TRU/FLO® Compound water meters meet or exceed the latest performance and accuracy requirements set by the AWWA C702, and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

### APPLICATION

The TRU/FLO Compound water meter is designed to register wide-flow ranges where varying flow rates are typical. TRU/FLO meters combine the low-flow sensitivity of a disc-type meter with the high-flow capacity of a turbine-type meter.

### OPERATION

The hydraulic valve transfers flow smoothly between the disc section and turbine section of the meter, minimizing the loss of accuracy in the crossover range. The turbine measuring element registers high flows and the disc measuring element registers low flows, ensuring accurate measurement at all flow rates.

### CONSTRUCTION

The TRU/FLO consists of a durable no-lead high copper alloy maincase, Neptune Turbine measuring element, Neptune T-10 chamber, a patented hydraulic valve, and two magnetic-driven, roll-sealed registers.

The 6" x 8" TRU/FLO assembly consists of two 8" x 6" concentric reducers, a 6" Neptune strainer, and a 6" Neptune TRU/FLO Compound meter.

The no-lead high copper maincase is corrosion resistant, lightweight, and easy to handle.

A calibration vane allows field calibration of the UME to lengthen service life and to ensure accurate registration.

The two magnetic-driven, roll-sealed registers simplify the meter's design and reduce long-term maintenance by eliminating complicated combining drive mechanisms. For reading convenience, the registers can be mounted in any one of four positions on the meter.

### WARRANTY

Neptune provides a limited warranty with respect to its TRU/FLO Compound water meters for performance, materials and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of major components, or a factory calibrated UME.

### KEY FEATURES

- Patented hydraulic valve design\*
- Minimum loss of accuracy in the crossover range increases revenue
- Spring-loaded valve eliminates need for frequent adjustment and service
- Combined Turbine and Disc Measuring Elements
  - Industry-leading flow ranges at 98.5%–101.5% accuracy ensure maximum revenue
  - Direct coupling of rotor to gear train ensures accurate registration
  - Unitized Measuring Element (UME) makes maintenance easier and faster with less downtime
  - Calibration vane allows in-line service to extend life and ensure accurate registration
- Compact Maincase
  - Made from no-lead high copper alloy
  - NSF/ANSI 61, Annex G certified and Annex F compliant
  - Lifetime guarantee
  - Compact, lightweight design provides for easy installation and in-line serviceability

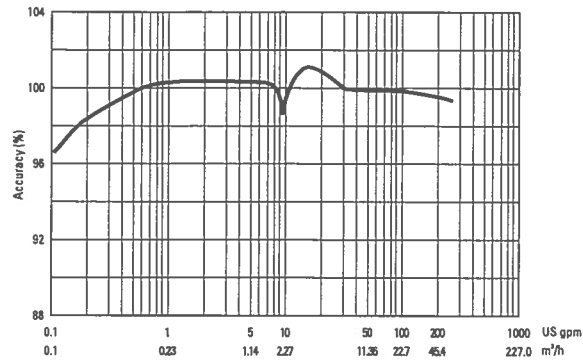
\*U.S. patent nos. 4,437,344 and 4,429,571

### SYSTEMS COMPATIBILITY

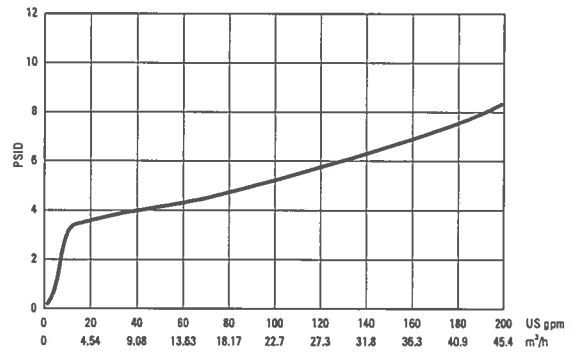
Adaptability to all present and future systems for flexibility.



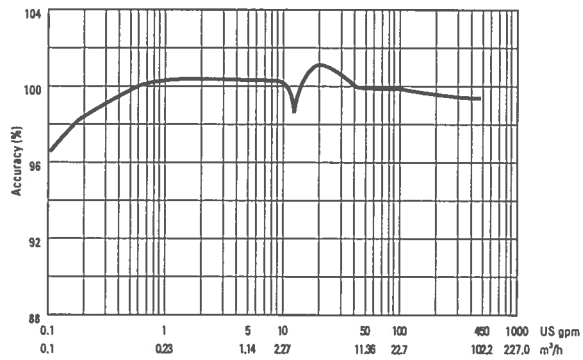
## 2" ACCURACY



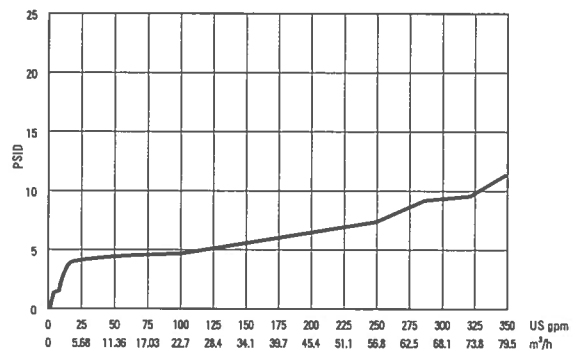
## 2" PRESSURE LOSS



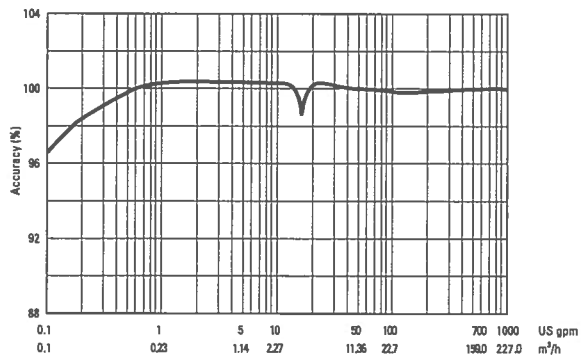
## 3" ACCURACY



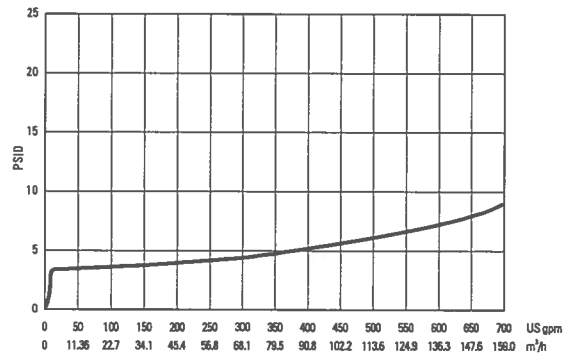
## 3" PRESSURE LOSS



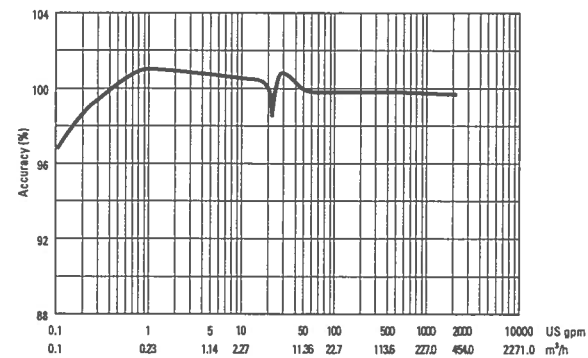
## 4" ACCURACY



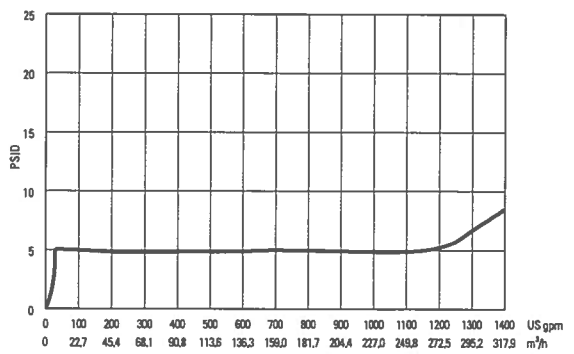
## 4" PRESSURE LOSS



## 6" ACCURACY



## 6" PRESSURE LOSS



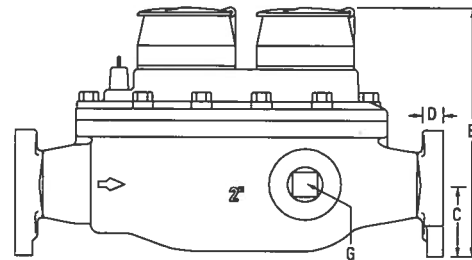
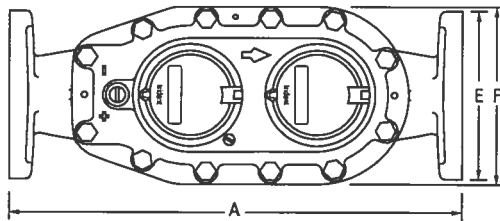


## OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy ( $\pm 1.5\%$ )	AWWA Standard	Low Flow @ 95% Accuracy
2"	1/2 to 200 US gpm 0.11 to 45.4 m <sup>3</sup> /h	2 to 160 US gpm .454 to 36.34 m <sup>3</sup> /h	1/8 US gpm 0.03 m <sup>3</sup> /h
3"	1/2 to 450 US gpm 0.11 to 102.2 m <sup>3</sup> /h	4 to 320 US gpm .91 to 72.68 m <sup>3</sup> /h	1/8 US gpm 0.03 m <sup>3</sup> /h
4"	1 to 1000 US gpm 0.23 to 227.1 m <sup>3</sup> /h	6 to 500 US gpm 1.36 to 113.56 m <sup>3</sup> /h	1/2 US gpm 0.11 m <sup>3</sup> /h
6"	1 1/2 to 2000 US gpm 0.34 to 454.2 m <sup>3</sup> /h	10 to 1000 US gpm 2.27 to 227.12 m <sup>3</sup> /h	3/4 US gpm 0.17 m <sup>3</sup> /h
6" x 8"	1 1/2 to 2000 US gpm 0.34 to 454.2 m <sup>3</sup> /h	16 to 1600 US gpm 3.63 to 363.4 m <sup>3</sup> /h	3/4 US gpm 0.17 m <sup>3</sup> /h

## DIMENSIONS

Meter Size	A in/mm	B-Std in/mm	B-PRO in/mm	B-E-Coder)R900i™ in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	Flange Type	Weight lbs/kg
2" HP	15 1/4 387	8 5/8 219	9 229	12 1/8 308	2 1/2 64	13/16 21	5 7/8 149	6 152	1 1/2 NPT 38	2" Oval 150 lb	32 14.5
3"	17 432	10 1/2 267	11 279	14 1/4 362	3 3/4 95	5/8 16	7 1/2 191	8 1/2 216	1 1/2 NPT 38	3" ANSI 150 lb	72 32.7
4"	20 508	12 1/2 318	13 330	16 1/4 413	4 1/2 114	11/16 17	9 229	9 1/8 232	2 NPT 51	4" ANSI 150 lb	100 45.4
6"	24 610	15 3/4 400	16 1/4 413	19 1/2 495	5 1/2 140	1 25	11 279	12 3/4 324	2 NPT 51	6" ANSI 150 lb	208 94.3
6"x8"	55 3/8 1407	15 3/4 400	16 1/4 413	19 1/2 495	5 1/2 140	1 25	11 279	12 3/4 232	2 NPT 51	6" ANSI 150 lb	460 208.5



## GUARANTEED SYSTEMS COMPATIBILITY

All Neptune TRU/FLO Compound meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VI), E-Coder®R900i™, E-Coder®, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

## REGISTRATION

		Turbine Side		Disc Side
<b>Registration</b>		2", 3", 4"	6" 6"x 8"	2",3",4" 6",6"x 8"
<b>(per sweep hand revolution)</b>				
1,000	US Gallons		✓	
1,000	Imperial Gallons		✓	
100	US Gallons	✓		
100	Imperial Gallons	✓		
100	Cubic Feet		✓	
10	US Gallons			✓
10	Imperial Gallons			✓
10	Cubic Feet	✓		
10	Cubic Metres		✓	
1	Cubic Foot			✓
1	Cubic Metre	✓		
0.1	Cubic Metre			✓
		Turbine Side	Disc Side	
<b>Register Capacity</b>		2", 3", 4"	6" 6"x 8"	2",3",4" 6",6"x 8"
<b>(6-wheel odometer)</b>				
1,000,000,000	US Gallons		✓	
1,000,000,000	Imperial Gallons		✓	
100,000,000	US Gallons	✓		
100,000,000	Imperial Gallons	✓		
100,000,000	Cubic Feet		✓	
10,000,000	US Gallons			✓
10,000,000	Imperial Gallons			✓
10,000,000	Cubic Feet	✓		
10,000,000	Cubic Metres		✓	
1,000,000	Cubic Feet			✓
1,000,000	Cubic Metres	✓		
100,000	Cubic Metres			✓

## SPECIFICATIONS

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 150 psi (1034 kPa)
- Maximum operating temperature: 80°F
- Register: direct reading, center sweep, roll-sealed, magnetic drive with low-flow indicator
- Measuring element:
  - AWWA Class II Turbine, hydrodynamically balanced rotor
  - Nutating disc

## OPTIONS

- Sizes: 2"HP, 3", 4", 6", and 6"x 8"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register types:
  - Direct reading: bronze box and cover (standard)
  - Remote reading systems\*: ProRead, E-Coder®R900i, E-Coder, TRICON/S, TRICON/E3
  - Reclaim
- Companion flanges:
  - 2", 3", 4" bronze or cast iron
  - 6", 6" x 8" cast iron
- Strainer: 2", 3", 4", 6" NSF/ANSI 61 no-lead high copper alloy

\* Consult factory for meter performance specifications when fitted with ARB.

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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 **NEPTUNE**  
TECHNOLOGY GROUP  
neptunetg.com



# HIGH PERFORMANCE TURBINE METER

SIZES: 1-1/2", 2", 3", 4", 6", 8", and 10"



High Performance Turbine water meters offer some of the widest flow ranges of any turbine meters on the market.



HP Turbine water meters offer some of the widest flow ranges of any turbine meters on the market. All HP Turbine water meters meet or exceed the latest performance and accuracy requirements of AWWA C701 and maximum continuous flow rates may be exceeded by as much as 25% for intermittent periods.

## CONSTRUCTION

Each HP Turbine consists of a rugged no-lead high copper alloy maincase, an AWWA Class II turbine measuring element, and a roll-sealed register.

The maincase is corrosion resistant, lightweight, and compact. Inlet and outlet connections are flanged. Strainers are available to prevent debris from entering the meter and to reduce the effects of uneven water flow due to upstream piping variations.

The Unitized Measuring Element (UME) allows for quick, easy, in-line interchangeability. Water volume is measured accurately at all flows by a specially designed assembly. The hydrodynamically balanced thrust compensated rotor relieves pressure on the thrust bearings to minimize wear and provide sustained accuracy over an extended operating life. Direct coupling of the rotor to the gear train eliminates revenue loss due to slippage during fast starts and line surges. A calibration vane allows in-field calibration of the UME to lengthen service life and to ensure accurate registration.

The roll-sealed register eliminates leaking and fogging. A magnetic drive couples the register with the measuring element.

## APPLICATION

The HP Turbine water meter is designed for applications where flow rates are consistently moderate to high.

## SYSTEMS COMPATIBILITY

Adaptability to all present and future systems for flexibility.

## KEY FEATURES

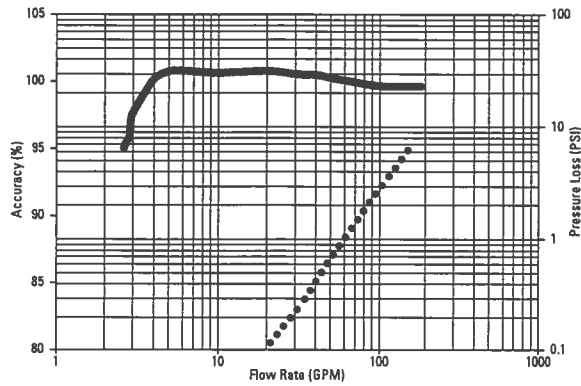
- Roll-Sealed Register
  - Magnetic drive, low torque registration ensures accuracy
  - Impact-resistant register design with flat glass for readability
  - 1:1 ratio, low flow indicator identifies leaks
  - Bayonet mount allows in-line serviceability
  - Tamperproof seal pin deters theft
  - Date of manufacture, size, and model stamped on dial face
- No-Lead Maincase
  - Made from no-lead high copper alloy
  - NSF/ANSI 61, Annex G certified and Annex F compliant
  - Compact design is lightweight and easy to handle
  - Sturdy, durable, corrosion resistant
  - Resists internal pressure stresses and external damage
  - Residual value
- Turbine Measuring Element
  - Excellent low flow sensitivity and wide flow ranges available at 98.5%–101.5% accuracy
  - Direct coupling of rotor to gear train prevents slippage and ensures accurate registration
  - Interchangeable measuring element allows for in-line service
  - Hydrodynamically balanced rotor
  - Reusable O-ring gasket on 3" –10" sizes

## WARRANTY

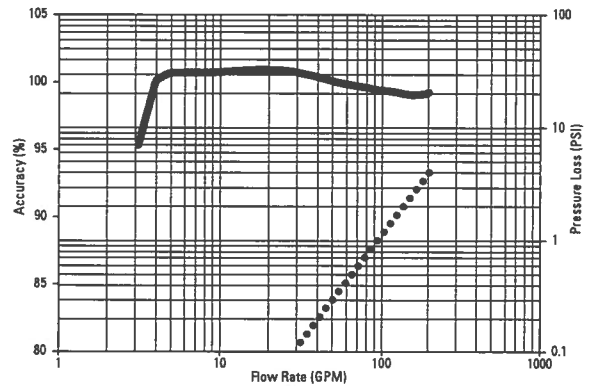
Neptune provides a limited warranty with respect to its HP Turbine water meters for performance, materials, and workmanship.

When desired, owner maintenance is easily accomplished by in-line replacement of major components.

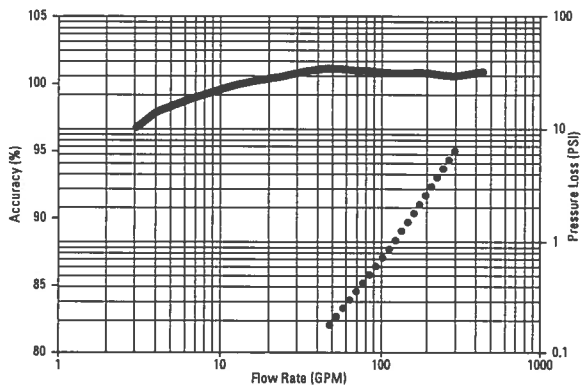
### 1-1/2" ACCURACY



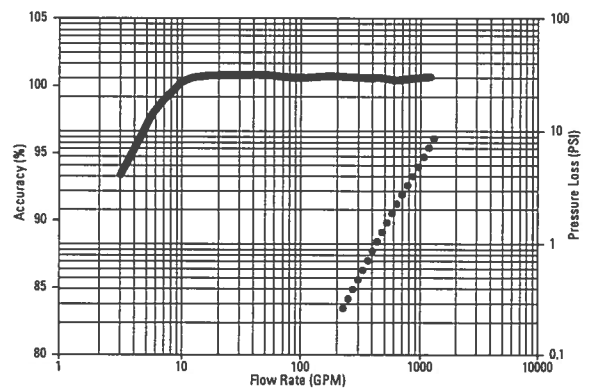
### 2" ACCURACY



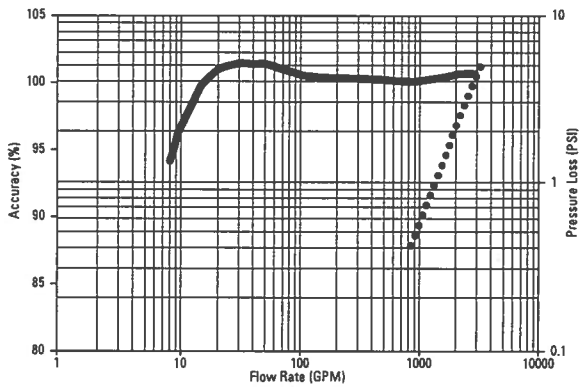
### 3" ACCURACY



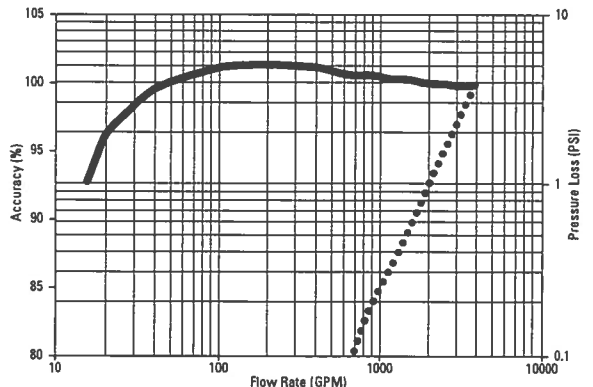
### 4" ACCURACY



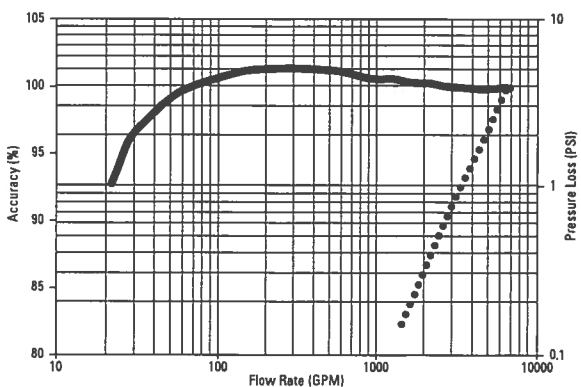
### 6" ACCURACY



### 8" ACCURACY



### 10" ACCURACY



— Accuracy  
 ..... Head Loss

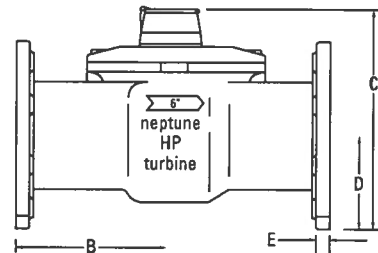
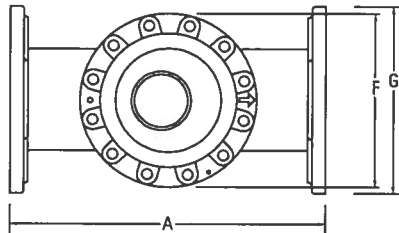
*These charts show typical meter performance. Individual results may vary.*

## OPERATING CHARACTERISTICS

Meter Size	Normal Operating Range @100% Accuracy ( $\pm 1.5\%$ )	Maximum Intermittent Flow	AWWA Standard
1 1/2"	4 to 160 US gpm 0.91 to 36.3 m <sup>3</sup> /h	200 US gpm 45.4 m <sup>3</sup> /h	N/A
2"	4 to 200 US gpm 0.91 to 45.4 m <sup>3</sup> /h	250 US gpm 56.8 m <sup>3</sup> /h	4 to 160 US gpm 0.91 to 36.3 m <sup>3</sup> /h
3"	5 to 450 US gpm 1.14 to 102.2 m <sup>3</sup> /h	560 US gpm 127.2 m <sup>3</sup> /h	8 to 350 US gpm 1.8 to 79.5 m <sup>3</sup> /h
4"	10 to 1200 US gpm 2.27 to 272.5 m <sup>3</sup> /h	1500 US gpm 340.7 m <sup>3</sup> /h	15 to 630 US gpm 3.4 to 143.0 m <sup>3</sup> /h
6"	20 to 2500 US gpm 4.55 to 567.8 m <sup>3</sup> /h	3100 US gpm 704.1 m <sup>3</sup> /h	30 to 1400 US gpm 6.8 to 317.9 m <sup>3</sup> /h
8"	35 to 4000 US gpm 7.95 to 908.5 m <sup>3</sup> /h	5000 US gpm 1135.6 m <sup>3</sup> /h	50 to 2400 US gpm 11.4 to 545 m <sup>3</sup> /h
10"	50 to 6500 US gpm 11.36 to 1476.3 m <sup>3</sup> /h	8000 US gpm 1817 m <sup>3</sup> /h	75 to 3800 US gpm 17.0 to 863 m <sup>3</sup> /h

## DIMENSIONS

Meter Size	A in (mm)	B in (mm)	C-STD in (mm)	C-ProRead™ in (mm)	C-E-Coder)R900i™ in (mm)	D in (mm)	E in (mm)	F in (mm)	G in (mm)	Weight lbs (kg)
1 1/2"	10 (254)	6 1/2 (165)	7 1/8 (181)	7 9/16 (192)	10 7/8 (276.2)	1 3/4 (44)	3/4 (19)	4 1/2 (114)	5 3/8 (137)	19 (8.6)
2"	10 (254)	6 1/2 (165)	7 5/8 (194)	8 1/16 (204.8)	11 3/8 (288.9)	2 1/8 (54)	13/16 (21)	4 1/2 (114)	5 3/8 (137)	20 (9.1)
3"	12 (305)	6 (152)	10 (254)	10 7/16 (265.1)	13 3/4 (349.3)	3 3/4 (95)	5/8 (16)	6 1/4 (159)	7 1/2 (191)	40 (18.1)
4"	14 (356)	6 1/2 (165)	10 7/8 (276)	11 5/16 (287.3)	14 5/8 (371.4)	4 1/2 (114)	3/4 (19)	8 1/8 (206)	9 (229)	52 (23.6)
6"	18 (457)	8 5/8 (219)	13 (330)	13 7/16 (341.3)	16 3/4 (425.5)	5 1/2 (140)	1 (25)	10 1/4 (260)	11 (279)	115 (52.2)
8"	20 (508)	9 5/8 (244)	15 1/2 (394)	15 15/16 (404.8)	19 1/4 (489)	6 3/4 (171)	1 1/8 (29)	10 1/4 (260)	13 1/2 (343)	195 (88.4)
10"	26 (660)	12 5/8 (321)	15 1/2 (394)	15 15/16 (404.8)	19 1/4 (489)	8 (203)	1 1/4 (32)	10 1/4 (260)	16 (406)	275 (124.7)



## GUARANTEED SYSTEMS COMPATIBILITY

All HP Turbine water meters are guaranteed adaptable to our ARB®V, ProRead™ (ARB VI), E-Coder®R900i™, E-Coder®, TRICON®/S, TRICON/E®3, and Neptune meter reading systems without removing the meter from service.

## REGISTRATION

Registration (per sweep hand revolution)		
	1 1/2", 2", 3", 4"	6", 8", 10"
1,000 US Gallons		✓
1,000 Imperial Gallons		✓
100 US Gallons	✓	
100 Imperial Gallons	✓	
100 Cubic Feet		✓
10 Cubic Feet	✓	
10 Cubic Metres		✓
1 Cubic Metre	✓	
Register Capacity (6-wheel odometer)		
	1 1/2", 2", 3", 4"	6", 8", 10"
1,000,000,000 US Gallons		✓
1,000,000,000 Imperial Gallons		✓
100,000,000 US Gallons	✓	
100,000,000 Imperial Gallons	✓	
100,000,000 Cubic Feet		✓
10,000,000 Cubic Feet	✓	
10,000,000 Cubic Metres		✓
1,000,000 Cubic Metres	✓	

## SPECIFICATIONS

- Application: cold water measurement of flow in one direction
- Maximum operating pressure: 175 psi (1206 kPa)
- Maximum operating temperature: 80°F
- Register: direct reading, center sweep, roll-sealed, magnetic drive with low-flow indicator
- Measuring element: AWWA Class II Turbine, hydrodynamically balanced rotor

## OPTIONS

- Sizes: 1 1/2", 2", 3", 4", 6", 8", 10"
- Units of measure: U.S. gallons, imperial gallons, cubic feet, cubic metres
- Register Types:
  - Direct reading: Bronze box and cover (standard)
  - Remote reading systems\*: ARBV, ProRead, E-Coder®R900i, E-Coder, TRICON/S, TRICON/E3
  - Reclaim
- Companion flanges:
  - 1 1/2" and 2" (oval): bronze or cast iron
  - 3", 4", 6": bronze or cast iron
  - 8" and 10": cast iron
- Strainer:
  - 2"–6" NSF/ANSI 61 no-lead high copper alloy
  - 8"–10" NSF/ANSI 61 no-lead high copper alloy

\* Consult factory for meter performance specifications when fitted with ARB.

Neptune engages in ongoing research and development to improve and enhance its products. Therefore, Neptune reserves the right to change product or system specifications without notice.

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**NEPTUNE**  
TECHNOLOGY GROUP

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# AquaMaster™ Electronic Water Meter

Sizes: 5/8" - 24"



## Materials of Construction

### Lining

5/8" - 1"	PPS
1 1/2" - 3"	POM-C
4" - 6"	Chloro-Butyl Rubber
8" - 24"	EPDM

### End Connections

5/8"	Brass 3/4" NPSM Threaded
3/4"	Brass 1" NPSM Threaded
1"	Brass 1 1/4" NPSM Threaded
1 1/2" - 24"	Stainless Steel Flange ANSI B16.5 Class 150

Electrodes	316L Stainless Steel
Grounding Rings	304 Stainless Steel
Display	Aluminum Alloy with Glass Window
Extended Battery Display	Stainless Steel housing, thermoplastic outer cover, polyurethane resin finish

## Power Supply

AC Power	85-265V, 47 - 440 Hz, <10 VA
Battery	3.6V Lithium, 1.5 year typical life
Extended Battery Version	5-6 year life

<u>Conductivity</u>	>50 $\mu$ S/cm
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<u>Pressure Limit</u>	150 PSI
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The state of the art in water flow measurement, the AquaMaster™ Electronic Water Meter combines outstanding performance, innovative features, user benefits and low cost of ownership to ensure it is your first choice for bulk water, fire service, custody transfer and process management applications. Suitable for use as a utility revenue meter or industrial flow instrument, the AquaMaster™ is your solution to metering problems.

A wide range of configuration options, from power source and display mount to choice of engineering units displayed allow the user to best fit the meter to the application and enjoy the ease of use the meter provides.

### Features include:

- Internal battery power options or AC with battery backup
- Very accurate measurement over wide flow range
- Bi-directional flow monitoring
- Daily or weekly tariff functions
- Comprehensive test mode
- Standard pulse output





**Application.** The meter is suitable for use in applications with potable cold water; water containing debris including ground, well, river and irrigation water, plant maintenance and process applications; as well as treated effluent.

**Operation.** AquaMaster™ is an electromagnetic water meter operating via Faraday's principle of magnetic induction. A conductive fluid, water, moving through the sensors' magnetic field induces an electrical voltage proportional to the rate of flow of the fluid. The meter measures the voltage between the stainless steel electrodes in the sensor tube and calculates the flow rate. Total volume is inferred from the known cross section of the flow tube.

**Compliance to Standards.** AquaMaster™ is designed, manufactured and calibrated to internationally recognized standards: ISO 9001, NAMAS, NIST, NATA. FM approval available for Fire Service Meters (see AMCO spec AM-FSM-TS).

#### The Next Generation

##### Commercial Water Flow Meter

AquaMaster™, available in sizes 5/8" to 24" (15 to 600 mm), is the total solution for flow measurement in the water industry. Outstanding performance, innovative features and user benefits, coupled with low cost of ownership ensures that AquaMaster™ is the first choice for bulk revenue, fire service, custody transfer and production metering.

AquaMaster™ has been designed specifically for the water industry in response to its strin-

gent demands for enhanced metering capability; enabling ever more efficient and cost effective operation and compliance with increasing legal requirements.

In addition to high measurement performance the AquaMaster offers reading of totalizers via the industry standard inductive pad reader or radio frequency automatic meter reading. This feature allows easy access to billing information without the need to physically access the meter.

##### No External Power Required for Remote Locations

- No external power supply (2 internal batteries)
- 3-year battery life (28 months on 14" meters or larger)
- Site-replaceable batteries
- Unique battery management system gives a battery replacement window in excess of 1 year, with no flat-battery interruption to measurement.

AquaMaster™ is the ideal solution for locations where there is no external power. Through new design technology two user-replaceable internal batteries provide a 3-year battery life, thus eliminating the high cost of providing a power supply to the meter.

##### Typical Applications

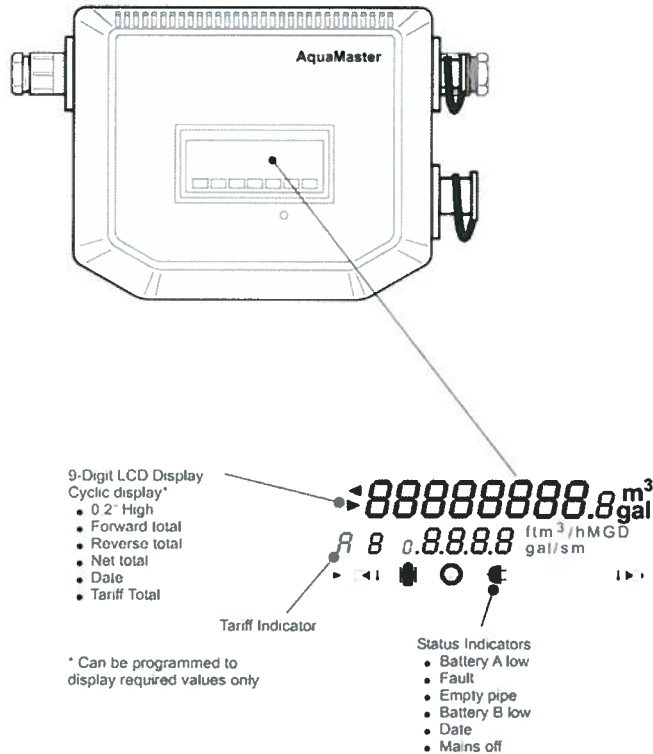
- Bulk revenue
- Custody transfer
- Production metering
- Treated effluent



### Electronic Display Unit

- Comprehensive display
- Submersible for use in flooded pits rated IP68 (NEMA 6)
- Resettable or secure totals
- 1/5" high displays for totals (exceeding AWWA register digit requirements)
- Total security:
  - 2 user security levels
  - Anti-tamper seals and switch
- 3 outputs (pulses and alarm)

The AquaMaster™ Electronic Display Unit provides the most comprehensive range of flow data and information currently available to the water industry. If all the data is not required, the unit can be configured so that only the required values are displayed, thus ensuring simple reading with no superfluous data. Likewise, the display is available for top or side viewing, depending on the location of the meter, for easy reading in all locations.



### Standard Tariff Setting

AquaMaster incorporates a multiple tariff feature where the accumulated flow volume is routed to one of two 8-digit signed tariffs; tariff A and tariff B, depending on time and date. It is fully programmable by the user for time of day, day of week or date during the year. These user-defined times/dates can be combined in a variety of modes as illustrated in the tables below.

Mode	Tariff A	Tariff B
1	Day time during weekend	Night time at weekend + day and night during week
2	Day time during week	Night time during week + day and night during weekend
3	All day times	All night times
4	Night time during weekend	Day time during weekend + day and night during week
5	Day and night during weekend	Day and night during week
6	Day time during weekend + night time during weekend	Night time during week + day time during weekend
7	All day times + night time during weekend	Night time during week

Mode	Tariff A	Tariff B
1	Day time during summer	Night time during summer + day and night during winter
2	Day time during winter	Night time during winter + day and night during summer
3	All day times	All night times
4	Night time during summer	Day time during summer + day and night during winter
5	Day and night during summer	Day and night during winter
6	Day time during winter + night time during summer	Night time during winter + day time during summer
7	All day times + night time during summer	Night time during winter

**Easy, Low Cost Installation**

No matter what the location or installation requirements, AquaMaster™ provides a cost-effective solution.

Both the sensor and the Electronic Display Unit are fully submersible, enabling installation in flooded meters vaults.

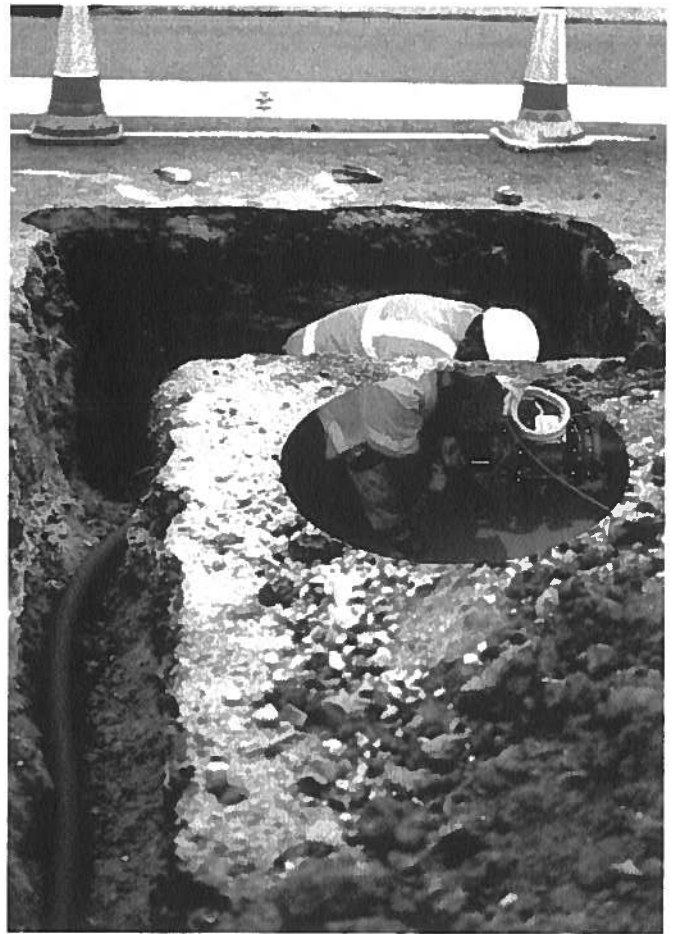
In addition, the sensor is buriable, thus eliminating the expense of a vault. Installation merely involves excavating to the pipeline, fitting the sensor and back filling the hole, to ensure very fast, low cost installation. The associated Electronic Display Unit is then located in the most convenient position for the user.

For new installations, the elimination of ancillary items (such as strainers) reduce material and installation cost. AquaMaster's compact size allows easy replacement of compound or turbine with the addition of spool pieces.

These factors, together with the innovative 'Fit and Flow™' system, ensure foolproof installation with total user confidence.

**Fit and Flow™**

- No need to match sensor and Electronic Display Unit
- Fast, reliable installation
- Foolproof, no errors
- Sensor stores all calibration factors, site settings, serial numbers, etc.
- Volume totalizer and tariff values backed-up in sensor for total security
- Multiple, programmable password levels stored for measurement security



*Underground Installation of AquaMaster™*

## General Specification

### AquaMaster - Operating Parameters

	Maximum Flow (gpm) AC: 99.75%-100.25% Bat: 99.5%-100.5%	Continuous Duty Flow (gpm) AC: 99.75%-100.25% Bat: 99.5%-100.5%	Accuracy AC Powered			Accuracy Battery Powered			Head Loss at Continuous Flow (psi)
			Low Flow (gpm) 97%-103%	Low Flow (gpm) 98.5%-101.5%	Normal Flow (gpm) 99.75%-100.25%	Low Flow (gpm) 97%-103%	Low Flow (gpm) 98.5%-101.5%	Normal Flow 99.5%-100.5%	
5/8"	22	18	0.03	0.06	0.33	0.06	0.15	1.0	8.2
3/4"	35	28	0.05	0.09	0.55	0.12	0.23	1.7	7.1
1"	55	44	0.08	0.15	0.77	0.19	0.37	2.2	8.9
1 1/2"	136	110	0.19	0.37	6.60	0.46	0.92	6.6	7.1
2"	220	176	0.3	0.60	6.60	0.74	1.47	10.0	6.8
3"	756	440	0.8	1.50	8.80	1.84	3.67	26	7.0
4"	1,268	700	1.2	2.30	10	3.0	5.9	40	7.1
6"	2,838	1,760	3	6	30	7.5	15	101	8.9
8"	3,658	2,770	4.5	9	60	11.5	23	167	5.5
10"	5,855	4,400	7.5	15	90	18.5	37	264	6.9
12"	8,806	7,040	11.5	23	130	29.5	59	396	7.0
14"	8,806	7,040	23.5	47	352	73.5	147	528	3.5
16"	13,759	11,000	36.5	73	440	91.5	183	660	6.8
18"	19,263	15,400	51.5	103	570	128.5	257	859	8.3
20"	22,014	17,600	58.5	117	660	183.5	367	991	8.7
24"	34,673	27,700	92.5	185	1100	231.0	462	1651	5.3

### AquaMaster Operating Parameters Compared to AWWA Class II Turbine Meters (C701)

	Maximum Flow		Continuous Duty Flow		Low Flow		Normal Flow	Head Loss at C701 SMOC	
	AquaMaster (gpm) AC: 99.75%-100.25% Bat: 99.5%-100.5%	C701-88 (gpm) 98.5% -101.5%	AquaMaster (gpm) AC: 99.75%-100.25% Bat: 99.5%-100.5%	C701-88 (gpm) 98.5%-101.5%	AquaMaster AC (gpm) 98.5%-101.5%	AquaMaster- Battery (gpm) 98.5%-101.5%	C701-88 (gpm) 98.5%-101.5%	AquaMaster (psi)	C701-88 (psi)
2"	220	160	176	100	0.6	1.47	4	5.63	7
3"	756	350	440	240	1.5	3.67	8	4.45	7
4"	1268	630	700	420	2.3	5.9	15	5.74	7
6"	2838	1400	1760	920	6	15	30	5.62	7
8"	3658	2400	2770	1600	9	23	50	4.11	7
10"	5855	3800	4400	2500	15	37	75	5.12	7
12"	8806	5000	7040	3300	23	59	120	3.54	7

#### Wetted Materials

#### Screw End Meters

Brass

#### Flanged meters

Stainless Steel

#### Electrodes

Stainless Steel 316L

#### Lining

Suitable for potable water

#### Pressure Limitations

As flange rating

#### Conductivity

>50µS/cm

#### End Connections

#### Thread end connections

5/8" meter - 3/4" NPSM

3/4" meter - 1" NPSM

1" meter - 1 1/4" NPSM

#### 1 ft" to 12" (40 to 300mm) flanged

ANSI B16.5 1.5 Class 150

BS4504/ISO 7005 - PN16, PN10

AS 2129 Tables C, D and E

AS 4087/14, AS4087/16

JIS to BS2210, 5k, 10k and 30k

BS10 Tables D and E

#### 14" to 24" (350 to 600mm) flanged

ANSI B16.5 1.5 Class 150

BS4504/ISO 7005 - PN10, PN16

AS 2129 Tables C, D and E

AWWA C207 Class B and D

AS 4087/14, AS4087/16

#### Electronic Display Unit

#### Mounting

Integral with sensor

or

Remote up to 650 ft (200m)

#### Housing

IP68 (NEMA 6P) Aluminum Alloy with Glass Window

#### Electrical Connections

20/16mm plastic glands, 20mm armored, or accepts 1/2 in.

NPT threaded or military style plug & socket

#### Sensor Cable

Elster AMCO Water cable supplied as standard

Special cable available on application

SWA cable available on application

#### Power Supply

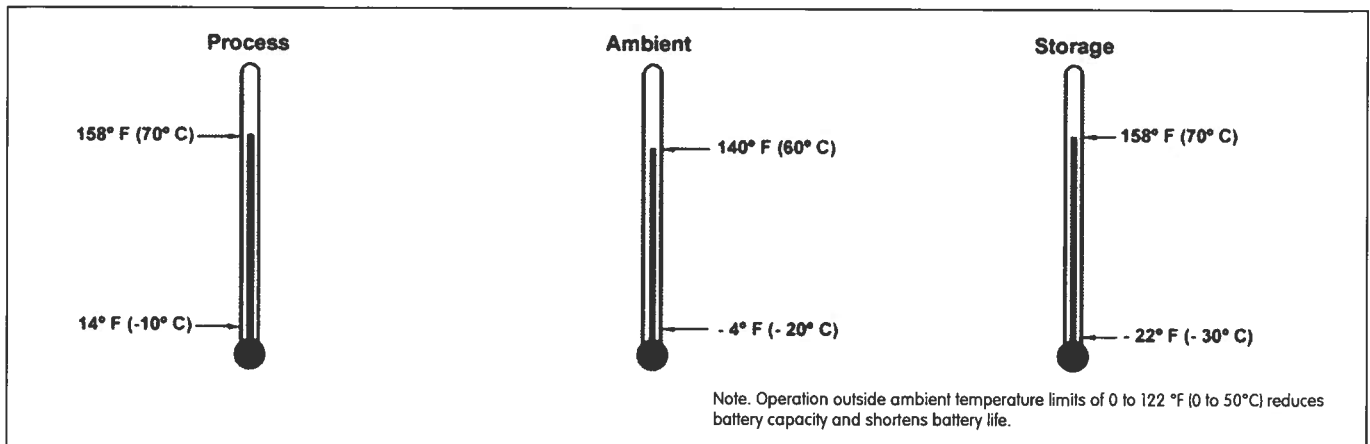
Battery life @ 32 to 122°F (0 to 50°C)

1 battery - typically 1.2 years

2 batteries - typically 3 years (28 months for 14" meters or larger)

Type	Voltage Range (V) Absolute Rating	Frequency (Hz)	VA
AC	85 to 265	47 to 440	<10
Battery	3.6 (Lithium)	-	-

#### Temperature Ranges



## ...Electronic Display Unit

### Pulse and Alarm Outputs

Three bi-directional solid state switches  
with common isolation  $\pm 35V$  DC 50mA.

Output 1	Forward only, or forward plus reverse pulses
Output 2	Reverse pulses, or direction indicator
Pulse output	50Hz maximum, 50% nominal duty cycle
Output 3	Alarm indicates any problems with the measurement or unit power

---

### Encoder Interface

#### Function

Remote reading of totalizer and ID.

#### Protocol

Elster AMCO Water Metering absolute encoder

#### Connections

2-wire for inductive reading pads (max. cable length 262 ft.)

3-wire for AMR

#### Compatible readers

T450

Logicon Versaprobe

Iron ERTs, Hexagram MTUs

#### Compatible inductive pads

Elster AMCO Water Metering

#### Serial Data Communications

Local Port                      RS232 compatible via Elster AMCO  
Water WMS lead (Option)

Remote Port (Option)        RS232 with RI, RTS and CTS  
(Not available with handshaking  
encoder output option)

---

### Response Time (Programmable)

#### Minimum

1s (AC powered)

15s (battery powered)

#### Languages

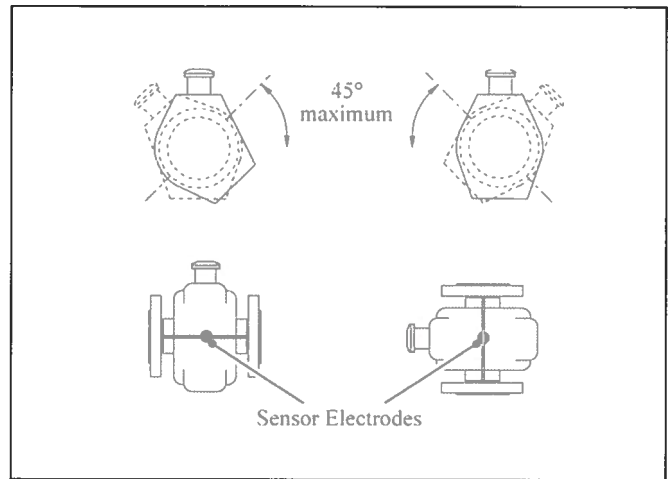
English

French

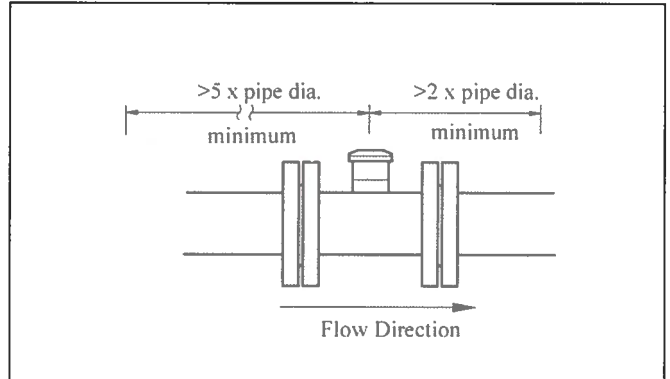
Spanish

Languages can be changed via Windows download pro-gram  
(contact Elster AMCO Water)

## Mounting



## Pipe Conditions



...General Specification

Default Settings Table

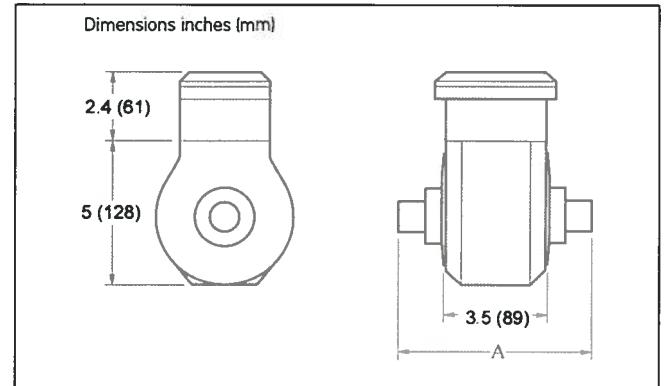
Configuration Parameter	Default North America
Pulse Factor	1
Pulse Units	Ugal
Totalizer Units	Ugal
Full Scale Flow	Iso 4064 Qn
Flow Units	MUGD
Velocity Units	ft/s
Date Format from Country Code	MMDDYY
Flow Response Time (s)	3
Display Flow Rate	Yes
Display Forward Total	Yes
Display Reverse Total	Yes
Display Net Total	No
Display Date	No
Display Velocity	No
Output Option Pulse Forward	Pulses Forward
Output Option Pulse Reverse	Pulses Reverse
Profile Factor	1
Probe Insertion Factor	1



## Sensor Specification (nominal dimensions)

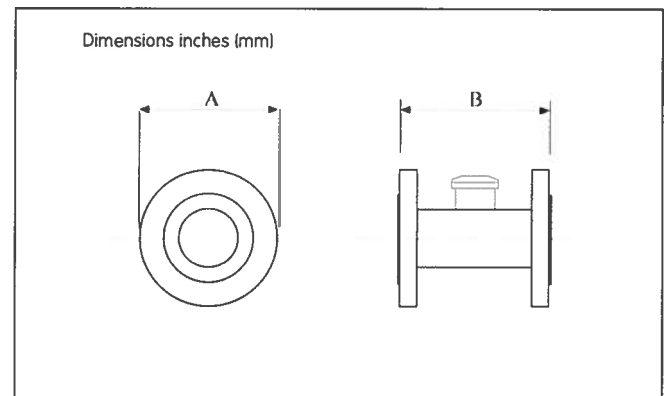
### 5/8" to 1" (15 to 25mm) - Screw Ends

Meter Size		Dimensions in. (mm)	Connection	Approx. Weight	
in.	mm	A		lb	kg
5/8	16	4.7 (119)	G 3/4 in. B or 3/4 in. NPSM	5	2.5
3/4	20	5 (127)	G 1 in. B or 1 in. NPSM	5	2.5
1	25	5 (127)	G 1 1/4 in. B or 1 1/4 in. NPSM	5	2.5



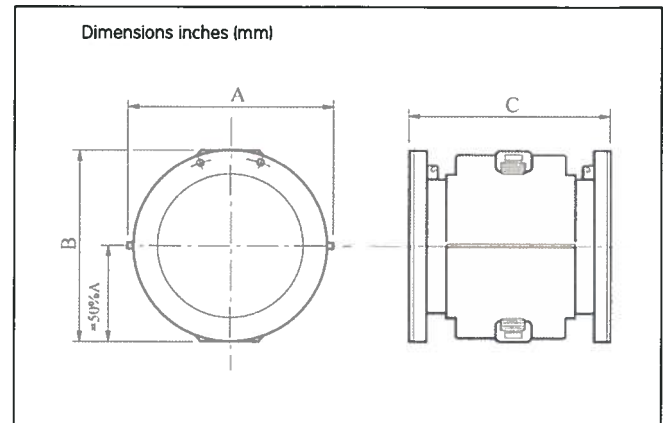
### 1 1/2" to 12" (40 to 300 mm) - Flanged

Meter Size		Dimensions in. (mm)		Approx. Weight	
in.	mm	A	B	lb	kg
1 1/2	40	7 (178)	7.9 (200)	20	9
2	50	7 (178)	7.9 (200)	23	10
3	80	8.6 (219)	7.9 (200)	40	18
4	100	9.1 (230.5)	9.8 (250)	54	24
6	150	11.1 (281)	11.8 (300)	84	38
8	200	15.8 (402)	13.8 (350)	81	37
10	250	17.3 (440)	17.7 (450)	132	60
12	300	18.9 (480)	19.7 (500)	154	70



### 14" to 24" (350 to 600 mm) - Flanged

Meter Size		Dimensions in. (mm)			Approx. Weight	
in.	mm	A	B	C	lb	kg
14	350	20.2 (513)	20.5 (520)	21.7 (550)	220	100
16	400	22.4 (570)	22.7 (576)	23.6 (600)	253	115
18	450	24.9 (632)	24.7 (627)	27.5 (698)	352	160
20	500	27.0 (688)	26.7 (679)	30.2 (768)	455	217
24	600	30.4 (772)	30.3 (770)	38.1 (918)	693	315



**ATTACHMENT J**

**San Juan Water District and City of Folsom Wholesale Water Supply Agreement**

**COPY**

**DUPLICATE ORIGINAL**

(Original Maintained  
by City Clerk)

Contract No. 510-03 03-07-02

Date Approved: 08/28/07

Reso/Admin: RESO # 8130

**SAN JUAN WATER DISTRICT AND CITY OF FOLSOM  
WHOLESALE WATER SUPPLY AGREEMENT**

This Agreement is entered into as of Sept. 26, 2007, by and between San Juan Water District, a public agency ("San Juan"), and the City of Folsom, a municipal corporation ("City").

**RECITALS**

A. San Juan is the owner of certain water rights and contractual water entitlements, and facilities and entitlements for the diversion, treatment and conveyance of water from Folsom Reservoir, to make available treated water supplies within its wholesale and retail service areas.

B. A portion of the City's retail water service area north of the American River, known as the "Ashland Area," is located within the wholesale service area boundaries of San Juan, as shown on the map that is **Exhibit 1** to this Agreement.

C. The City distributes treated water supplies made available by San Juan to the City's retail customers within the Ashland Area. San Juan has been providing treated water supplies to the Ashland Area since the formation of San Juan in 1954, and currently pursuant to a July 26, 1972 "Agreement for Transfer of Retail Water Distribution System known as the Ashland System to the San Juan Suburban Water District" ("1972 Agreement"), as amended on October 7, 1974 ("1974 Agreement") and on February 21, 1983 ("1983 Agreement"). This Agreement supersedes in its entirety the 1972 Agreement, the 1974 Agreement and the 1983 Agreement upon the effective date of this Agreement.

D. In accordance with the 1972 Agreement and the December 17, 1979 Judgment of the Superior Court in and for the County of Sacramento (Civil Case no. 269424, *City of Folsom v. San Juan Suburban Water District*), San Juan provides retail water service within the American River Canyon subdivision ("American River Canyon," as defined in Sacramento County Superior Court Civil Case no. 269424, which is shown on the map that is **Exhibit 1** to this Agreement), which is within the city limits of the City. San Juan and the City intend that: (1) San Juan will continue to provide retail water service to American River Canyon; and (2) nothing in this Agreement affects San Juan's right to continue providing retail water service to American River Canyon.

In consideration of the mutual covenants contained herein, San Juan and the City agree as follows:

1. **Recitals Incorporated.** The foregoing recitals are incorporated by reference.
2. **Definitions.** When used in this Agreement, the following terms are defined as set forth in this section:

- A. "CVP" means the Central Valley Project.
- B. "City" means the City of Folsom, a municipal corporation.
- C. "Member Agencies" means the following retail water service providers receiving wholesale water service from San Juan, and the retail water service customers of San Juan: (1) Citrus Heights Water District; (2) Fair Oaks Water District; (3) Orange Vale Water Company; (4) San Juan in its capacity as a retail water service provider; and (5) the City relative to the Ashland Area.
- D. "1972 Agreement" means the July 26, 1972 "Agreement for Transfer of Retail Water Distribution System known as the Ashland System to the San Juan Suburban Water District" between San Juan and the City.
- E. "1974 Agreement" means the October 7, 1974 amendment to the 1972 Agreement.
- F. "1983 Agreement" means the February 21, 1983 amendment to the 1972 Agreement.
- G. "Point of Delivery" means the discharge point of the Ashland Pumping Plant, to which San Juan will make water supplies available to the City under this Agreement.
- H. "Reclamation" means the United States Bureau of Reclamation.
- I. "San Juan" means San Juan Water District.
- J. "San Juan-Reclamation Agreement" means the April 12, 1954 agreement between the North Fork Ditch Company and the United States (Contract No. DA 04 167 eng 182), which was incorporated by reference in the June 19, 1962 CVP water supply contract between San Juan and the United States (Contract No. 14-06-200-152A, as amended). Under the San Juan-Reclamation Agreement, the total amount of water that may be diverted by San Juan under its pre-1914 water right and water right permit no. 4009 cannot exceed 33,000 acre feet per year at a maximum rate of 75 cfs.
- K. "San Juan's CVP Water Supply Contract" means a CVP water supply contract for 24,200 acre feet between San Juan and the United States (Contract No. 6-07-20-W1373-LTR1), as amended and renewed from time to time.
- L. "San Juan's Surface Water Supply and Water Shortage Management Plan" means the written plan for managing San Juan's Water Rights and Entitlements during times of water shortage, which San Juan intends to adopt in the future in consultation with the Member Agencies.

M. "San Juan's Water Rights and Entitlements" means the water rights and entitlements of San Juan that are used to make water supplies available to the City under this Agreement, the current sources of which are listed in paragraph A of section 6 of this Agreement.

N. "San Juan's Water Treatment and Conveyance Facilities" means the water diversion, pumping, treatment and conveyance facilities to be used by San Juan to make water supplies available to the City at the Point of Delivery, which are described in **Exhibit 2** to this Agreement.

3. **Term.** This Agreement is effective as of the date first mentioned above, and will continue in full force and effect for the same term as San Juan's CVP Water Supply Contract, including any renewals or extensions thereof. The San Juan CVP Contract will terminate on February 28, 2045, unless renewed or extended.

4. **Prior Water Supply Agreements Superseded.** This Agreement supersedes in their entirety the 1972 Agreement, 1974 Agreement and the 1983 Agreement, and any other prior wholesale water supply agreement between the City and San Juan.

5. **San Juan to Continue to Serve American River Canyon.** In accordance with the December 17, 1979 Judgment of the Superior Court in and for the County of Sacramento (Civil Case no. 269424, *City of Folsom v. San Juan Suburban Water District*), San Juan will continue to provide retail water service to American River Canyon, and nothing in this Agreement affects San Juan's right to continue providing retail water service to American River Canyon. In the event the District desires to withdraw from retail water service within the City, the City will have the first right of refusal to provide retail service within the area lying within the City now being served by the District.

6. **Water Supplies To Be Made Available To the City.**

A. **Water Supplies Currently Available To San Juan.** Water will be made available by San Juan to the City under this Agreement from water supplies that are available to San Juan from time to time. San Juan will use its best efforts to preserve and protect San Juan's Water Rights and Entitlements. The water supplies that are currently available to San Juan include the following: (1) a pre-1914 appropriative water right to divert at the rate of 60 cubic feet per second ("cfs") from the American River with a priority date of 1853, which is delivered from Folsom Reservoir by Reclamation without charge to San Juan under the San Juan-Reclamation Agreement; (2) an appropriative water right under permit no. 4009 (application 5830, filed on February 11, 1928) to divert at the rate of 15 cfs from the American River, which is delivered from Folsom Reservoir by Reclamation without charge to San Juan under the San Juan-Reclamation Agreement; (3) San Juan's CVP Water Supply Contract; (4) a water supply contract dated December 7, 2000 between San Juan and Placer County Water Agency for 25,000 acre feet per year (the authorized service area for which currently includes San Juan's service

area in Placer County); and (5) temporary supplies of surplus water from Reclamation under Section 215 of Public Law 97-293.

**B. Member Agencies To Have First Priority of Use.** San Juan will operate San Juan's Water Treatment and Conveyance Facilities, and utilize San Juan's Water Rights and Entitlements, to provide a first priority of use to the Member Agencies. San Juan may use San Juan's Water Treatment and Conveyance Facilities and San Juan's Water Rights and Entitlements to provide water service to other water purveyors to the extent such water service is surplus to the water supply needs of the Member Agencies. San Juan may transfer water under San Juan's Water Rights and Entitlements for use outside the boundaries of San Juan that San Juan determines is surplus to the water supply needs of the Member Agencies during the term of the water transfer. Prior to making such determination, San Juan will request from the City information regarding the water supply needs of the City during the term of the proposed water transfer, and San Juan will consider this information in making its determination of the availability of surplus water. San Juan will use the net revenues from each water transfer to defray the costs that are recovered through San Juan's wholesale water rates and charges under section 12 of this Agreement. Such water transfers will not: (1) result in the City receiving during the term of a water transfer less water than the amount provided for under this Agreement, without the consent of the City; or (2) increase the wholesale water rates and charges under section 12 of this Agreement, without the consent of the City.

**C. Beneficial Use by the City.** Since the purchase of the Ashland Area water system by the City under the 1972 Agreement, the City has beneficially used a portion of San Juan's Water Rights and Entitlements referred to in items (1), (2), (3) and (5) of paragraph A of this section. The City has demonstrated to the satisfaction of San Juan that the City has projected future demands within the Ashland Area for water use such that the City expects to utilize fully for reasonable and beneficial use the water supplies made available to it by San Juan.

**D. Peak Demands.** San Juan's Water Treatment and Conveyance Facilities are, in general, intended and designed to have sufficient capacity under normal conditions to meet the historical maximum daily water demands of water users in the Member Agencies' service areas. From time to time and place to place, higher rates of demand may be served if such water service does not interfere with normal service to any other portion of the Member Agencies' service areas. San Juan will determine when such peak demands will be served, and may limit the rate of water supply at the Point of Delivery, upon advance written notice to the Member Agency to the extent practicable.

**E. Annual Water Supplies To Be Made Available by San Juan to the City.** During each calendar year throughout the term of this Agreement, consistent with San Juan's Water Rights and Entitlements and subject to the terms of this Agreement (including subsections G and H of this section), San Juan will make available to the City the supplies of treated water at the Point of Delivery that are scheduled by the City. The City will make reasonable and beneficial use of the water supplies provided to the City by San Juan, in a manner that is consistent with the terms of San Juan's Water Rights and Entitlements.

**F. Scheduling Water Deliveries.** San Juan will schedule and make arrangements for water deliveries to the City under this Agreement based on information provided to San Juan by the City as requested by San Juan.

**G. Water Shortages and Interruptions in Water Deliveries.** San Juan will use all reasonable means to ensure against: (1) conditions of shortage in the water supplies available under San Juan's Water Rights and Entitlements; and (2) interruptions in San Juan's ability to use San Juan's Water Treatment and Conveyance Facilities in making water supplies available to the City at the Point of Delivery, where such conditions or interruptions could result in reductions or interruptions in water service to the City under this Agreement. San Juan may temporarily discontinue or reduce the water supplies made available to the City under this Agreement for the purposes of investigation, inspection, maintenance, repair, replacement or improvement of any of San Juan's Water Treatment and Conveyance Facilities, but to the extent practicable, San Juan will: (1) consult with the City and consider the City's water supply needs concerning a planned or unplanned interruption in water deliveries; (2) provide the City reasonable prior notice of any such interruption in water deliveries; and (3) use its best efforts to limit the duration of such conditions of shortage and interruption in water deliveries. San Juan will allocate available water supplies to the City and the other Member of Agencies in accordance with San Juan's Surface Water Supply and Water Shortage Management Plan, when adopted.

**H. Water Allocations During Conditions of Shortage.** To the extent that: (1) the water supplies available in any year under San Juan's Water Rights and Entitlements, and/or (2) the availability of use of San Juan's Water Treatment and Conveyance Facilities, are insufficient to make available the full water supplies requested by the City and other agencies who contract for wholesale water supplies from San Juan, San Juan will allocate its available water supplies in an equitable manner. San Juan will allocate available water supplies to the City and the other Member Agencies in accordance with San Juan's Surface Water Supply and Water Shortage Management Plan, when adopted.

**7. Point of Delivery and Measurement.**

**A. Identification of Point of Delivery and Measurement.** Water supplies made available by San Juan to the City under this Agreement will be delivered to and measured at the Point of Delivery. San Juan will be responsible for furnishing, installing, operating and maintaining in good operating condition water control and measurement facilities at the Point of Delivery.

**B. Normal Minimum Water Service Pressure at Point of Delivery.** San Juan will use its best efforts to operate San Juan's Water Treatment and Conveyance Facilities to provide the normal minimum water service pressure at the Point of Delivery.

**C. No Liability for Distribution of Water Beyond the City's Point of**



**Delivery.** To the extent that San Juan makes water available to the City consistent with the terms of this Agreement, San Juan will not be liable for the control, carriage, handling, use, disposal or distribution of water supplies made available to the City under this Agreement past the Point of Delivery, unless the cause of such liability can reasonably be determined to be San Juan's action or inaction in making water available before or at the Point of Delivery. To the extent that San Juan makes water available to the City consistent with the terms of this Agreement, San Juan will not be liable for claims of damage of any nature whatsoever, including but not limited to property damage or personal injury, arising out of or connected with the control, carriage, handling, use, disposal or distribution of water supplies made available to the City under this Agreement past the Point of Delivery, unless the cause of such liability can reasonably be determined to be San Juan's action or inaction in making water available before or at the Point of Delivery. Unless the cause of such liability can reasonably be determined to be San Juan's action or inaction, the City will indemnify, defend and hold harmless San Juan and its directors, officers, employees and agents from any such damages or claims of damages. To the extent that San Juan makes water available to the City consistent with the terms of this Agreement, San Juan will not be liable for changes in water quality or violations of drinking water standards downstream of the Point of Delivery, unless the cause of such changes or violations is reasonably determined to be San Juan's action or inaction in making water available before or at the Point of Delivery. San Juan will consult and cooperate with the City to avoid such changes or violations.

**8. Compliance with the Requirements of San Juan's CVP Water Supply Contract.** To ensure that the provisions of San Juan's CVP Water Supply Contract that apply to the delivery of water within the City's service area are met, and in order to comply with the provisions of California Water Code section 526, the City will ensure that: (a) all surface water delivered within the City's boundaries is measured at each service connection with water measuring devices or water measuring methods of comparable effectiveness that have been approved by the Contracting Officer (as defined in San Juan's CVP Water Supply Contract), on a schedule that has been approved by the Contracting Officer; and (b) an effective water conservation and efficiency program that has been approved by the Contracting Officer is implemented within the City's service area.

**9. Water Quality.** Water supplies made available by San Juan to the City under this Agreement will meet or exceed the minimum standards for drinking water quality in effect at the time of delivery as established by: (a) the California Department of Health Services, Office of Drinking Water Standards, or its successor agency; and (b) federal agencies with jurisdiction over drinking water standards. San Juan will provide water quality reports to the City as required by law.

**10. Operation, Maintenance and Improvement of San Juan's Water Treatment and Conveyance Facilities.**

**A. San Juan's Water Treatment and Conveyance Facilities.** San Juan will utilize San Juan's Water Treatment and Conveyance Facilities to make water supplies available

to the City at the Point of Delivery.

**B. Operation, Maintenance and Capital Improvement of San Juan's Water Treatment and Conveyance Facilities.** San Juan will operate, maintain, repair, replace and improve San Juan's Water Treatment and Conveyance Facilities as San Juan determines to be prudent, consistent with legal obligations and sound engineering, construction and utility operating practices, for the mutual benefit of the City and the other Member Agencies. San Juan will consult with the City and the other Member Agencies prior to planning and undertaking capital improvements to San Juan's Water Treatment and Conveyance Facilities.

**11. Area in Which Water May Be Used.** Water supplies made available to the City under this Agreement will not be sold or otherwise disposed of by the City for use outside of the Ashland Area, without the prior written consent of San Juan, which consent may be withheld in the reasonable discretion of San Juan.

**12. Water Rates and Charges.**

**A. Wholesale Water Rates and Charges.** San Juan will set wholesale water rates and charges from time to time for making treated water supplies available to the City, and other agencies that contract for wholesale water supplies from San Juan, to recover San Juan's costs of making treated water supplies available, including without limitation, the cost of untreated water under San Juan's Water Rights and Water Entitlements, and the cost of operation, maintenance, repair, replacement of, and capital improvements to, San Juan's Water Treatment and Conveyance Facilities. San Juan's wholesale water rates and charges will include the melded cost of water from San Juan's Water Rights and Water Entitlements. San Juan's wholesale water rates and charges will include interest and penalties for delinquent payments, as appropriate. San Juan will determine its wholesale water rates and charges based on cost-of-service principles and other applicable provisions of law. San Juan will ensure that revenues collected by San Juan from the City and other Member Agencies for wholesale water service are equitably used for the benefit of such wholesale water customers. San Juan will provide the City with 150 days' advance notice of proposed changes in water rates and charges under this Agreement, provide the City an opportunity to comment on such proposed changes prior to adoption of changes by San Juan, and address the City's comments to the extent practicable.

**B. Schedule for Payment.** San Juan will bill the City quarterly in advance for one-quarter of the estimated annual water service charges and for estimated quarterly water deliveries to the City under this Agreement. The estimates for quarterly water deliveries will be based on the City's actual average water deliveries for the corresponding quarter in the 6 preceding years. San Juan will bill the City a minimum of 15 days prior to the beginning of each quarter. The City will pay San Juan within 30 days from the beginning of each calendar quarter. Within 30 days after the end of each calendar year, San Juan will reconcile the actual water deliveries with the estimated water deliveries, and determine the rates and charges to the City for the actual quantities of water made available. San Juan will either bill the City for any additional amount owed, or promptly refund to the City any amounts paid by the City in excess of the

amount owed. If San Juan determines that the City owes San Juan an additional amount, San Juan will bill the City within 45 days of the determination, and the City will pay San Juan within 45 days of receipt of the bill. If San Juan determines that the City has paid in excess of the amount owed, San Juan will pay the City within 45 days of such determination.

**C. General Obligation of the City.** The obligations of the City under this Agreement will constitute general obligations of the City, and the City will use all of the powers and resources available to it under the law to collect the funds necessary for, and to pay, the City's obligations to San Juan under this Agreement. The City as a whole is obligated to pay San Juan the payments becoming due under this Agreement, notwithstanding any individual default by its water users, customers or others in the payment to the City of assessments, taxes or other rates and charges levied by the City.

### **13. General Provisions.**

**A. Supporting Resolutions.** Each party represents that it has legal authority to enter into this Agreement and to perform its obligations hereunder, and will provide to the other party concurrent with execution of this Agreement, a duly-authorized resolution or other document authorizing the person executing this Agreement to do so.

**B. Integration.** This Agreement constitutes the sole, final, complete, exclusive and integrated expression and statement of the terms of this contract concerning the subject matter of this Agreement, and supersedes all prior negotiations, representations or agreements, either oral or written, that may be related to the subject matter of this Agreement.

**C. Construction and Interpretation.** The parties acknowledge that this Agreement has been arrived at through negotiation, and that each party has had a full and fair opportunity to revise the terms of this Agreement. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting party will not apply in construing or interpreting this Agreement.

**D. Severability.** The invalidity, illegality or unenforceability of any provision of this Agreement will not render the other provisions invalid, illegal or unenforceable.

**E. Periodic Review; Amendment.** San Juan and the Member Agencies plan to meet not less than once every five years to review the terms of their wholesale water supply agreements, and discuss possible amendments thereto. The terms of this Agreement may be modified or amended only by a subsequent written agreement approved and executed by the parties.

**F. Notices.** Any notice and other communications required under this Agreement will be in writing, and will be deemed to have been duly given upon the date of service, if: (a) served personally on the party to whom notice is to be given; or (b) sent by electronic mail, and the party to whom notice is to be given confirms receipt; or (c) mailed, on

the third day after mailing, if mailed to the party to whom notice is to be given, by first-class mail, postage prepaid, and properly addressed to the following:

General Manager  
San Juan Water District  
Post Office Box 2157  
Granite Bay, CA 95746-2157

City Manager  
City of Folsom  
50 Natoma Street  
Folsom, CA 95630

**G. Relationship of Parties.** Nothing in this Agreement will be construed to create an association, joint venture, trust or partnership, or to impose a trust or partnership covenant, obligation or liability.

**H. No Third-Party Beneficiaries.** This Agreement will not be construed to create any third-party beneficiaries, except that this Agreement recognizes that the City is a third-party beneficiary of San Juan's contractual water entitlements that are set forth in paragraph A of section 5 of this Agreement. This Agreement is for the sole benefit of the parties and their respective successors and permitted transferees and assigns, and no other person or entity will be entitled to rely on or receive any benefit from this Agreement or any of its terms.

**I. Successors and Assigns.** This Agreement will bind and be for the benefit of the respective successors and assigns of the parties, except that, no assignment or transfer of any rights or duties of a party under this Agreement will be effective unless approved in writing by the other party.

**J. Opinions and Determinations.** Where the terms of this Agreement provide for an action to be based on the opinion, determination, approval or review of either party, such terms are not intended to be, and will not be construed as permitting, such action to be arbitrary, capricious or unreasonable. Any opinion, determination, approval or review required of a party under this Agreement will be provided in a timely manner.

**K. Reasonable Cooperation.** The parties will reasonably cooperate with each other, including the execution of all necessary documents, to carry out the purposes and intent of this Agreement. Each party will reasonably cooperate with the other to provide materials and information as requested from time to time to facilitate implementation and review of this Agreement, and the parties' respective rights and duties thereunder.

**L. General Indemnity.** Each party to this Agreement will indemnify, defend and hold harmless the other party, and its respective directors, officers, employees and agents, from and against any and all liability, losses, claims, damages, expenses, demands, settlements and costs (including, but not limited to, interest, penalties, attorney, expert witness and consulting fees, and litigation costs) of any nature arising out of the party's performance under this Agreement and caused by any negligent act or omission, willful misconduct or violation of law of or by the party, or the party's employees, agents, contractors and subcontractors.

**M. Waiver.** The waiver at anytime by a party of its rights with respect to a default or other matter arising in connection with this Agreement will not be deemed to be a waiver with respect to any subsequent default or matter.

**N. Remedies Not Exclusive.** The remedies provided in this Agreement are cumulative and not exclusive, and are in addition to any other remedies that may be provided by law or equity. The exercise by either party of any remedy under this Agreement will be without prejudice to the enforcement of any other remedy.

The foregoing is hereby agreed to by the parties and executed in counterpart duplicate originals as of the effective date of this Agreement.

SAN JUAN WATER DISTRICT

CITY OF FOLSOM, a municipal Corporation

  
President, Board of Directors

\_\_\_\_\_  
By: City Manager

ATTEST:

ATTEST:

  
Secretary

\_\_\_\_\_  
Christina Schmidt, City Clerk

Approved as to form:

Approved as to form:

\_\_\_\_\_

  
Bruce C. Cline, City Attorney

#### List of Exhibits

1. Map showing Ashland Area and American River Canyon
2. San Juan's Water Treatment and the Conveyance Facilities

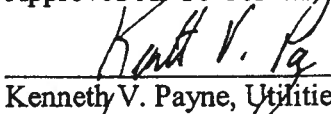
IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

Date: 9.26.2007

City of Folsom, A Municipal Corporation  
("City")

  
Kerry L. Miller, City Manager

Approved As To Content:

  
Kenneth V. Payne, Utilities Director

9/26/07  
Date

Approved As To Form:

  
Bruce C. Cline, City Attorney

9/26/07  
Date

Attests:

  
Christa Schmidt, City Clerk

9.27.07  
Date

Funding Available:

  
Gene Albaugh, Interim Director of Finance

9-7-07  
Date

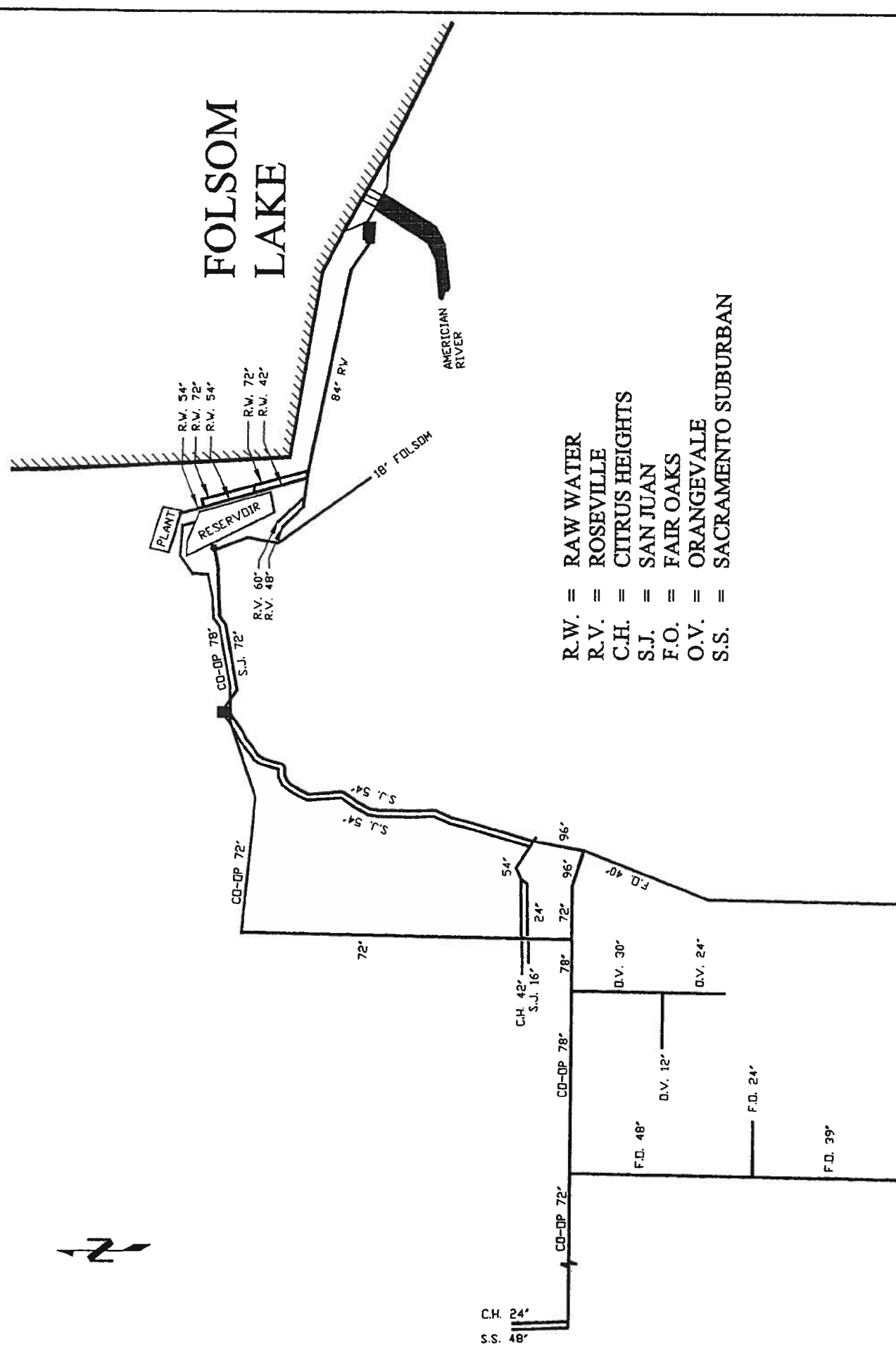








# FOLSOM LAKE



- R.W. = RAW WATER
- R.V. = ROSEVILLE
- C.H. = CITRUS HEIGHTS
- S.J. = SAN JUAN
- F.O. = FAIR OAKS
- O.V. = ORANGEVALE
- S.S. = SACRAMENTO SUBURBAN

EXHIBIT 2
SCHEMATIC ONLY
NOT TO SCALE

**ATTACHMENT K**

**El Dorado Irrigation District and City of Folsom Water System Interconnection  
Agreement**

**AGREEMENT FOR WATER SYSTEM INTERCONNECTION  
FOR EMERGENCY PURPOSES ONLY**

This Agreement for Water System Interconnection for Emergency Purposes Only (hereinafter referred to as "Agreement") is made as of the 12<sup>th</sup> day of January, 2010 (hereinafter referred to as the "Effective Date"), by and between the City of Folsom (hereinafter "City") and El Dorado Irrigation District (hereinafter "District").

**WITNESSETH**

WHEREAS, the City and District desire to have a metered "interconnection" between their respective water systems for the exchange of water during emergencies as specifically defined and described hereinafter.

NOW, THEREFORE, the parties hereto agree as follows:

**I. INTENT**

It is the intent of the parties to hereby enter into a "Mutual Aid" type of agreement to provide an emergency water supply from one party to the other on a limited short-term basis when reasonably unanticipated and unforeseen emergencies interfere for a short duration with that party's ability to maintain its usual water service level to its customers, or a substantial portion thereof.

Examples of such emergencies could include loss of water supply due to any number of events, including natural disaster, fire, broken water mains, loss of electric power, or unforeseen events which would temporarily interrupt the water supply to customers.

The interconnection shall not be used in the event that low pressures or outages are experienced resulting from inadequate infrastructure, and/or higher than normal or expected water demands caused by existing or new connections. In addition, the interconnection shall not be used to alleviate any drought conditions in effect in either jurisdiction.

**II. INTERCONNECTION**

- A. Due to topography and pressure characteristics of the respective water systems, the City is the primary beneficiary of the interconnection because of the ability to supplement by gravity. However, the interconnection shall include connecting points to install a pump system should the District experience an emergency that would necessitate use of City water supply to supplement the District's water system.
- B. The interconnection shall be constructed near Sophia Parkway in El Dorado County and Muirkirk Court in Sacramento County. The interconnection will be located inside El Dorado County, City or District right-of-way and/or easements.

- C. Any and all costs and expenses related to engineering, environmental review, construction, inspection, right-of-way, administration, procurement of materials and obtaining required permits or other approvals associated with design and construction of the interconnection shall be the sole responsibility of the City, less the pump and pump station facilities to accommodate flow from the Folsom system to the Districts system which will be located at the Districts current sewer lift station site . In the event the District incurs any such costs and/or expenses as a result of any activity under this Agreement, the City shall reimburse the District for the entire amount of those costs and/or expenses.
- D. The transfer of water shall be measured by a meter capable of measuring flow in either direction. The operating range of flow from either direction is between 500 and 2,500 gallons per minute. Both parties shall have full access to read the meter at all times.
- E. The interconnection, as shown in the 'City of Folsom EID Intertie Project' plans, prepared by Domenichelli and Associates, shall be owned and operated by both the City and the District as follows. The City shall own, maintain, operate, and repair all appurtenances associated with the interconnection West of, and including, the Post Indicator Valve. The District shall own, maintain, operate, and repair all appurtenances associated with the interconnection East of and including Valve #7. Both the City and the District shall have equal shared responsibility for owning, maintaining, operating and repairing all appurtenances associated with the interconnection between the Post Indicator Valve and Valve #7 (Refer to Exhibit No. 1 attached hereto and incorporated herein by reference for further clarification.) Both the City and the District shall have access to the interconnection systems at all times and have shared responsibility to operate the interconnection. The City shall be responsible for operating everything West of, and including, the Post Indicator Valve and the District shall be responsible for operating everything East of and including Valve #7. However, neither party shall operate the system without the express prior written consent of the other party. Commencement of operation of the interconnection must be in the presence of an authorized representative from both parties.

The City shall be solely responsible for any and all costs and/or expenses associated with operation , maintenance and/or repair of any appurtenance associated with the interconnection West of the Post Indicator Valve. The District shall be solely responsible for any and all costs and/or expenses associated with operation, maintenance and/or repair any appurtenances associated with the interconnection East of Valve #7. Both the City and the District shall have equal shared cost associated with the operation, maintaining and/or repairing of any appurtenances associated with the interconnection between the Post Indicator Valve and Valve #7.

### III. REQUEST FOR EMERGENCY WATER TRANSFERS

- A. Both parties shall have a designated representative available at all times in the area to receive and respond to requests for emergency water transfer, at telephone numbers and/or locations as follows:

City:

**Daytime**

Name: Jeremy Shykowski  
Title: Water Supervisor  
Address:  
194 Randall Drive  
Folsom, CA 95630  
Phone: (916) 439-7236  
Fax: (916) 361-3331  
Pager: (916) 948-5405  
Email: jshykowski@folsom.ca.us

**Nights/Weekends**

Name: Jeremy Shykowski  
Title: Water Supervisor  
Address:  
194 Randall Drive  
Folsom, CA 95630  
Phone: (916) 996-0094  
Fax: (916) 361-3331  
Pager: (916) 948-5405  
Email: jshykowski@folsom.ca.us

District:

Name: Dana Strahan  
Title: Drinking Water Operations  
Manager  
Address:   
2890 Mosquito Road  
Placerville, CA 95667  
Phone: (530) 642-4060  
Fax: (530) 642-4360  
Pager: (530) 363-8739 mobile  
Email: dstrahan@eid.org

Name: Dana Strahan  
Title: Drinking Water Operations  
Manager  
Address:   
2890 Mosquito Road  
Placerville, CA 95667  
Phone: (530) 333-9415  
Fax: (530) 642-4360  
Pager: (530) 363-8739 mobile  
Email: dstrahan@eid.org

All notices pertaining to this Agreement shall be in writing and addressed to the other party's designated representative at the address listed in this Section III. Notices shall be dispatched by both: 1) overnight delivery or U.S. mail and 2) fax or email. Notices dispatched by overnight delivery shall be deemed received on the business day following dispatch. Notices dispatched by U.S. mail shall be deemed received on the third business day following dispatch.

Either party may change its designated representative or his or her contact information at any time, but shall give the other party five (5) business days advance written notice of any such change.

- B. The party requesting access to water via the interconnection system shall deliver written notice to the other party's designated representative at the address listed in this Section III and shall confirm receipt of said notice by making direct contact with the other party's designated representative in-person or via telephone.

Upon receipt of a request for water via the interconnection system, the party receiving the request may, in its sole discretion, accept or deny the request for water. The parties understand and agree that this Agreement shall in no way obligate either party to deliver any water to the other party, or to continue the delivery of water, at any time, including, without limitation, situations involving immediate danger to life or property.

The party requesting access to water via the interconnection system shall be responsible for notifying all government agencies of the event as required by law, including but not limited to the California Department of Public Health, and shall generate and submit all required reports and other documentation thereto.

#### IV. HOLD HARMLESS

In exchange for the rights granted under this Agreement, and to the greatest extent permitted by law, each party shall release, indemnify, defend and hold harmless the other party, its elected officials, officers, employees, agents and representatives (collectively, "Indemnitees") from and against any and all claims, loss, damages, costs, expenses, liabilities and/or obligations of every kind and nature (including without limitation loss of revenue or profit or for direct, indirect, consequential, special, incidental or punitive damages) (collectively, "Claims") directly or indirectly arising out of or in any way related to, in whole or in part, this Agreement or any activity hereunder (including but not limited to the denial of any request for water under this Agreement or failure or disruption of water supply hereunder), including without limitation, Claims for loss or damage to any property, real or personal, or for death or injury to any person, however occurring, except to the extent such Claims are caused by the intentional misconduct or gross negligence of any Indemnatee. The parties' obligations under this Section IV shall survive termination of this Agreement.

#### V. WATER CHARGES

Water delivered to the City shall be charged at the District's commercial water rate then in effect. Water delivered to the District shall be charged at the City's commercial water rate then in effect.

#### VI. TERM AND TERMINATION

This Agreement shall commence as of the Effective Date and continue until terminated by either party as provided in this Section VI.

Either party may suspend or terminate this Agreement at any time without cause immediately upon issuance of written notice to the other party's designated representative at the address listed in Section III above. Upon termination of this Agreement by either party, the District shall

physically disconnect the two water systems using its best efforts not to damage the City's water facilities or cause a substantial loss of the City's water. The City shall reimburse the District for any and all costs and expenses associated with disconnection of the water systems.

#### VII. REPRESENTATIONS

Each party represents and warrants that it will comply with all federal, State and local laws, rules and regulations applicable to its activities under this Agreement, including without limitation all applicable health and safety, water quality, environmental and public contracting requirements. The City shall be solely responsible for securing any and all required federal, State and local approvals, permits and authorizations for any activity under this Agreement, including without limitation for construction, operation, maintenance and repair of the interconnection system.

Each person signing this Agreement represents and warrants that he or she is duly authorized to execute this Agreement on behalf of the party for which he or she signs.

#### VIII. ENVIRONMENTAL REVIEW

The parties understand and agree that execution of this Agreement in no way commits the parties to implement any action contemplated under this Agreement. Environmental review as required by law and associated permitting shall be completed prior to commencement of any action under this Agreement.

#### IX. ENTIRE AGREEMENT

This Agreement, including its exhibits, constitutes the complete agreement between the parties and supersedes all prior or contemporaneous agreements or representations, written or oral, concerning the subject matter of this Agreement. This Agreement may not be modified or amended without the mutual written consent of both parties.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]



IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

**CITY OF FOLSOM**

By: [Signature]  
(signature)

Name: Kerry L. Miller  
(print)

Title: City Manager

**Attest:**

Christa Freemantle for 1/21/10  
Christa Freemantle, CMC  
CITY CLERK

**Approved as to Content:**

By: [Signature]  
(signature)

Name: Kenneth V. Payne  
(print)

Title: Director of Utilities

**Approved as to Form:**

By: [Signature]  
(signature)

Name: Bruce C. Cline  
(print)

Title: City Attorney

**EL DORADO IRRIGATION DISTRICT**

By: [Signature]  
(signature)

Name: Jim Abercrombie  
(print)

Title: General Manager

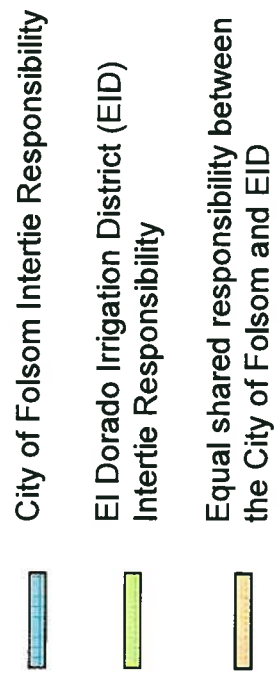
**Reviewed and Approved as to Form:**

By: [Signature]

Name: Thomas D. Compton

Title: EID Office of the General Counsel

## Folsom/EID Intertie Schematic



**ATTACHMENT L**

**City of Folsom 2008 California Urban Water Conservation Council Coverage Report**

# **COVERAGE REPORT**

**2007 - 2008**

Reported as of 7/13/09

## BMP 01 Coverage: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:  
City of Folsom

Reporting Period:  
07-08

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

A Reporting Unit (RU) must meet three conditions to satisfy strict compliance for BMP 1.

Condition 1: Adopt survey targeting and marketing strategy on time

Condition 2: Offer surveys to 20% of SF accounts and 20% of MF units during report period

Condition 3: Be on track to survey 15% of SF accounts and 15% of MF units within 10 years of implementation start date.

### Test for Condition 1

City of Folsom to Implement Targeting/Marketing Program by:	2006		
		<u>Single-Family</u>	<u>Multi-Family</u>
Year City of Folsom Reported Implementing Targeting/Marketing Program:	2001		2001
City of Folsom Met Targeting/Marketing Coverage Requirement:	YES		YES

### Test for Condition 2

			<u>Single-Family</u>	<u>Multi-Family</u>
Survey Program to Start by:	2005	Residential Survey Offers (%)	205.85%	22.86%
Reporting Period:	07-08	Survey Offers $\geq$ 20%	YES	YES

### Test for Condition 3

	Completed Residential Surveys	
	<u>Single Family</u>	<u>Multi-Family</u>
Total Completed Surveys 1999 - 2008:	1,488	1,320
Past Credit for Surveys Completed Prior to 1999 (Implementation of Reporting Database):		
Total + Credit	1,488	1,320
Residential Accounts in Base Year	17,244	4,664
City of Folsom Survey Coverage as % of Base Year Residential Accounts	8.63%	28.30%

Coverage Requirement by Year 3 of Implementation per Exhibit 1	2.50%	2.50%
City of Folsom on Schedule to Meet 10-Year Coverage Requirement	ON TRACK	YES

---

**BMP 1 COVERAGE STATUS SUMMARY:**

**Water supplier is on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

**BMP 02 Coverage: Residential Plumbing Retrofit**

Reporting Unit:

**City of Folsom**

Reporting Period:

**07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of three conditions to satisfy strict compliance for BMP 2.

Condition 1: The agency has demonstrated that 75% of SF accounts and 75% of MF units constructed prior to 1992 are fitted with low-flow showerheads.

Condition 2: An enforceable ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts is in place for the agency's service area.

Condition 3: The agency has distributed or directly installed low-flow showerheads and other low-flow plumbing devices to not less than 10% of single-family accounts and 10% of multi-family units constructed prior to 1992 during the reporting period.

**Test for Condition 1**

<u>Report Year</u>	<u>Report Period</u>	<u>Single-Family</u>		<u>Multi-Family</u>	
		<u>Reported Saturation</u>	<u>Saturation ≥ 75%?</u>	<u>Reported Saturation</u>	<u>Saturation ≥ 75%?</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				
2005	05-06		NO		NO
2006	05-06		NO		NO
2007	07-08		NO		NO
2008	07-08		NO		NO

**Test for Condition 2**

<u>Report Year</u>	<u>Report Period</u>	<u>City of Folsom has ordinance requiring showerhead retrofit?</u>
1999	99-00	
2000	99-00	
2001	01-02	
2002	01-02	
2003	03-04	
2004	03-04	
2005	05-06	NO
2006	05-06	NO
2007	07-08	NO
2008	07-08	NO

**Test for Condition 3**



Reporting Period: 07-08

<u>1992 SF Accounts</u>	<u>Num. Showerheads Distributed to SF Accounts</u>	<u>Single-Family Coverage Ratio</u>	<u>SF Coverage Ratio &gt; 10%</u>
5,730	3,625	63.3%	YES
<u>1992 MF Accounts</u>	<u>Num. Showerheads Distributed to MF Accounts</u>	<u>Multi-Family Coverage Ratio</u>	<u>MF Coverage Ratio &gt; 10%</u>
2,847	692	24.3%	YES

---

**BMP 2 COVERAGE STATUS SUMMARY:****Water supplier is on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

## BMP 03 Coverage: System Water Audits, Leak Detection and Repair

Reporting Unit:

Reporting Period:

City of Folsom

07-08

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of two conditions to be in compliance with BMP 3:

Condition 1: Perform a prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.

Condition 2: Perform a prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.

### Test for Conditions 1 and 2

<u>Report Year</u>	<u>Report Period</u>	<u>Pre-Screen Completed</u>	<u>Pre-Screen Result</u>	<u>Full Audit Indicated</u>	<u>Full Audit Completed</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				
2005	05-06	YES	83.4%	Yes	NO
2006	05-06	YES	81.0%	Yes	NO
2007	07-08	NO	75.5%	Yes	NO
2008	07-08	NO	89.6%	Yes	NO

### BMP 3 COVERAGE STATUS SUMMARY:

Water supplier is not currently on track to meet the coverage requirements for this BMP.

Reported as of 7/13/09

**BMP 04 Coverage: Metering with Commodity Rates for all New Connections and Retrofit of Existing**

Reporting Unit:

Reporting Period:

**City of Folsom****07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

For agencies signing the MOU prior to December 31, 1997:  
100% of existing unmetered accounts to be metered and billed by volume of use by July 1, 2009.

For agencies signing the MOU after December 31, 1997:  
- 100% of existing unmetered accounts to be metered and billed by volume of use by July 1, 2012 **OR** within six years of signing the MOU (whichever date is later).  
- All retrofits must be completed no later than one year prior to the requirements of state law (January 1, 2025).

**Test for Compliance**

Total Meter Retrofits Reported through 2008	1,999
No. of Unmetered Accounts in Base Year	5,730
Meter Retrofit Coverage as % of Base Year Unmetered Accounts	34.9%
Coverage Requirement by Year 3 of Implementation per Exhibit 1	50.0%
RU on Schedule to meet 10 Year Coverage Requirement	NO

**BMP 4 COVERAGE STATUS SUMMARY:**

**Water supplier is not currently on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

## BMP 05 Coverage: Large Landscape Conservation Programs and Incentives

Reporting Unit:

City of Folsom

Reporting Period:

07-08

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet three conditions to comply with BMP 5.

Condition 1: Develop water budgets for 90% of its dedicated landscape meter accounts within four years of the date implementation is to start.

Condition 2: (a) Offer landscape surveys to at least 20% of its CII accounts with mixed use meters each report cycle and be on track to survey at least 15% of its CII accounts with mixed use meters within 10 years of the date implementation is to start OR (b) Implement a dedicated landscape meter retrofit program for CII accounts with mixed use meters or assign landscape budgets to mixed use meters.

Condition 3: Implement and maintain customer incentive program(s) for irrigation equipment retrofits.

#### Test for Condition 1

Year	Report Period	BMP 5 Implementation Year	No. of Irrigation Meter Accounts	No. of Irrigation Accounts with Budgets	Budget Coverage Ratio	90% Coverage Met by Year 4
1999	99-00					NA
2000	99-00					NA
2001	01-02					NA
2002	01-02					NA
2003	03-04					NA
2004	03-04					NA
2005	05-06					NA
2006	05-06					NA
2007	07-08	1	254			NA
2008	07-08	2	186			NA

#### Test for Condition 2a (survey offers)

Select Reporting Period:	07-08
Large Landscape Survey Offers as % of Mixed Use Meter CII Accounts	213.7%
Survey Offers Equal or Exceed 20% Coverage Requirement	YES

#### Test for Condition 2a (surveys completed)

Total Completed Landscape Surveys Reported through 07-08	77
Credit for Surveys Completed Prior to Implementation of Reporting Database	
Total + Credit	77
CII Accounts in Base Year	913
RU Survey Coverage as a % of Base Year CII Accounts	8.4%

## Coverage Requirement by Year of Implementation per Exhibit 1

1.5%

RU on Schedule to Meet 10 Year Coverage Requirement

ON TRACK

**Test for Condition 2b (mixed use budget or meter retrofit program)**

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>Agency has mix-use budget program</u>	<u>No. of mixed-use budgets</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04			
2004	03-04			
2005	05-06		NO	
2006	05-06		NO	
2007	07-08	1	NO	
2008	07-08	2	NO	
<u>Report Year</u>	<u>Report Period</u>	<u>BMP 4 Implementation Year</u>	<u>No. of mixed use CII accounts</u>	<u>No. of mixed use CII accounts fitted with irrig. meters</u>
1999	99-00			
2000	99-00			
2001	01-02			
2002	01-02			
2003	03-04			
2004	03-04			
2005	05-06		913	
2006	05-06		913	
2007	07-08	2	962	
2008	07-08	3	871	186

**Test for Condition 3**

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>RU offers financial incentives?</u>	<u>No. of Loans</u>	<u>Total Amt. Loans</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				
2005	05-06		YES		
2006	05-06		YES		
2007	07-08	1	YES		
2008	07-08	2	YES		
<u>Report Year</u>	<u>Report Period</u>	<u>No. of Grants</u>	<u>Total Amt. Grants</u>	<u>No. of rebates</u>	<u>Total Amt. Rebates</u>
1999	99-00				
2000	99-00				
2001	01-02				

2002	01-02		
2003	03-04		
2004	03-04		
2005	05-06	3	13,583
2006	05-06		
2007	07-08	2	14,602
2008	07-08	2	15,777

---

**BMP 5 COVERAGE STATUS SUMMARY:**

**Water supplier is on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

**BMP 06 Coverage: High-Efficiency Washing Machine  
Rebate Programs**Reporting Unit:  
**City of Folsom**Reporting  
Period:  
**07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

---

An agency must meet two conditions to comply with BMP 6.

Condition 1: Offer a cost-effective financial incentive to customers for the purchase of high-efficiency washers with water factors of 9.5 or less.

Condition 2: Meet Coverage Goal ( $CG = \text{Total Dwelling Units} \times 0.0768$ ) by July 1, 2008. Agencies signing the MOU after July 1, 2003, shall have a prorated Coverage Goal, based on implementation period of less than 4.0 years.

---

**Test for Condition 1**Agency offers rebates for  
residential high-efficiency  
washers with water  
factors of 9.5 or less:

YES

---

**Test for Condition 2**

Coverage Goal:

1,158

Total Coverage Points  
Awarded  
(incl. past credit):

1,098

% of Coverage Goal:

94.81%

---

**BMP 6 COVERAGE STATUS SUMMARY:****Water supplier is not currently on track to meet the coverage requirements  
for this BMP.**

Reported as of 7/13/09

**BMP 07 Coverage: Public Information Programs**

Reporting Unit:

Reporting Period:

**City of Folsom****07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 7.

Condition 1: Implement and maintain a public information program consistent with BMP 7's definition.

**Test for Condition 1**

<u>Year</u>	<u>Report Period</u>	<u>BMP 7 Implementation Year</u>	<u>RU Has Public Information Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		
2004	03-04		
2005	05-06		YES
2006	05-06	1	YES
2007	07-08	2	YES
2008	07-08	3	YES

**BMP 7 COVERAGE STATUS SUMMARY:****Water supplier has met the coverage requirements for this BMP.**



Reported as of 7/13/09

**BMP 08 Coverage: School Education Programs**Reporting Unit:  
**City of Folsom**Reporting Period:  
**07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 8.

Condition 1: Implement and maintain a school education program consistent with BMP 8's definition.

**Test for Condition 1**

<u>Year</u>	<u>Report Period</u>	<u>BMP 8 Implementation Year</u>	<u>RU Has School Education Program?</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		
2004	03-04		
2005	05-06		YES
2006	05-06	1	YES
2007	07-08	2	YES
2008	07-08	3	YES

**BMP 8 COVERAGE STATUS SUMMARY:****Water supplier has met the coverage requirements for this BMP.**

Reported as of 7/13/09

## BMP 09 Coverage: Conservation Programs for CII Accounts

Reporting Unit:  
City of Folsom

Reporting Period:  
07-08

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet three conditions to comply with BMP 9.

Condition 1: Agency has identified and ranked by use commercial, industrial, and institutional accounts.

Condition 2(a): Agency is on track to survey 10% of commercial accounts, 10% of industrial accounts, and 10% of institutional accounts within 10 years of date implementation to commence.

OR  
Condition 2(b): Agency is on track to reduce CII water use by an amount equal to 10% of baseline use within 10 years of date implementation to commence.

OR  
Condition 2(c): Agency is on track to meet the combined target as described in Exhibit 1 BMP 9 documentation.

#### Test for Condition 1

Ranked Commercial Use	NO
Ranked Industrial Use	NO
Ranked Institutional Use	NO

#### Test for Condition 2a

	Commercial	Industrial	Institutional
Total Completed Surveys Reported through 2008	89	0	10
Credit for Surveys Completed Prior to Implementation of Reporting Databases			
Total + Credit	89		10
CII Accounts in Base Year	870	25	50
RU Survey Coverage as % of Base Year CII Accounts	10.2%		20.0%
Coverage Requirement by Year 2 of Implementation per Exhibit 1	1.0%	1.0%	1.0%
RU on Schedule to Meet 10 Year Coverage Requirement	YES	NO	YES

#### Test for Condition 2b

Year	Performance Target Savings (AF/yr)	Performance Target Savings Coverage	Performance Target Savings Coverage Requirement	Coverage Requirement Met
2006			0.5%	NO
2007	0	0.0%	1.0%	NO
2008	0	0.0%	1.7%	NO
2009			2.4%	NO
2010			3.3%	NO

2011	4.2%	NO
2012	5.3%	NO
2013	6.4%	NO
2014	7.7%	NO
2015	9.0%	NO

---

**Test for Condition 2c**

---

Total BMP 9 Surveys + Credit	99
BMP 9 Survey Coverage	10.5%
BMP 9 Performance Target Coverage	0.0%
BMP 9 Survey + Performance Target Coverage	10.5%
Combined Coverage Equals or Exceeds Coverage Requirement?	YES

---

**BMP 9 COVERAGE STATUS SUMMARY:**

**Water supplier is not currently on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

**BMP 11 Coverage: Conservation Pricing**

Reporting Unit:

Reporting Period:

**City of Folsom****07-08****MOU Exhibit 1 Coverage Requirement**

Agency indicated "at least as effective as" implementation during report period?

No

Per June 13, 2007 revision, an agency must meet one condition to comply with BMP 11.

Condition 1: Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. If agency provides retail sewer service, agency shall maintain rate structure for sewer service consistent with definition of conservation pricing for sewer service in Part II, Section in A.

Water Service

- Agencies signing the MOU prior to June 13, 2007, implementation shall commence no later than July 1, 2007.
- Agencies signing the MOU after June 13, 2007, implementation shall commence no later than July 1 of the year following the year the Agency signed the MOU.

Sewer Service

- Agencies signing the MOU prior to December 31, 1997, implementation shall commence no later than July 1, 2008.
- Agencies signing the MOU or becoming subject to the MOU after December 31, 1997, implementation shall commence no later than July 1 of the first year following the year the agency signed or became subject to the MOU.

**Test for Condition 1**

Agency is Fully Metered	NO
Agency Employed Conserving WATER Rate Structure	YES
Agency Provides Sewer Service	YES
Agency Employed Conserving SEWER Rate Structure	NO

**BMP 11 WATER COVERAGE STATUS SUMMARY:**

Coverage period has not started for this water supplier.

**BMP 11 SEWER COVERAGE STATUS SUMMARY:**

Water supplier is not currently on track to meet the coverage requirements for this BMP.

Reported as of 7/13/09

**BMP 12 Coverage: Conservation Coordinator**

Reporting Unit:

Reporting Period:

**City of Folsom****07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.

**Test for Compliance**

<u>Report Year</u>	<u>Report Period</u>	<u>Conservation Coordinator Position Staffed?</u>	<u>Total Staff on Team (incl. CC)</u>
1999	99-00		
2000	99-00		
2001	01-02		
2002	01-02		
2003	03-04		
2004	03-04		
2005	05-06	YES	1
2006	05-06	YES	2
2007	07-08	YES	2
2008	07-08	YES	3

**BMP 12 COVERAGE STATUS SUMMARY:****Water supplier has met the coverage requirements for this BMP.**

Reported as of 7/13/09

**BMP 13 Coverage: Water Waste Prohibition**

Reporting Unit:

Reporting Period:

**City of Folsom****07-08****MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 13.

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

**Test for Condition 1****Agency or service area prohibits:**

<u>Year</u>	<u>Gutter Flooding</u>	<u>Single-Pass Cooling Systems</u>	<u>Single-Pass Car Wash</u>	<u>Single-Pass Laundry</u>	<u>Single-Pass Fountains</u>	<u>Other</u>	<u>RU has ordinance that meets coverage requirement</u>
1999							
2000							
2001							
2002							
2003							
2004							
2005	YES	NO	NO	NO	NO	NO	NO
2006	YES	NO	NO	NO	NO	NO	NO
2007	YES	NO	NO	NO	NO	NO	NO
2008	YES	YES	YES	YES	YES	YES	YES

**BMP 13 COVERAGE STATUS SUMMARY:**

**Water supplier is not currently on track to meet the coverage requirements for this BMP.**

Reported as of 7/13/09

## BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit: City of Folsom

### MOU Exhibit 1 Coverage Requirement

A Reporting Unit (RU) must meet one of the following conditions to be in compliance with BMP 14.

Condition 1: Retrofit-on-resale (ROR) ordinance in effect in service area.

Condition 2: Water savings from toilet replacement programs equal to 90% of Exhibit 6 coverage requirement.

An agency with an exemption for BMP 14 is not required to meet one of the above conditions. This report treats an agency with missing base year data required to compute the Exhibit 6 coverage requirement as out of compliance with BMP 14.

**Status: Water supplier is on track to meet the coverage requirements for this BMP. as of 2009**

<u>Coverage Year</u>	<u>BMP 14 Data Submitted to CUWCC</u>	<u>Exemption Filed with CUWCC</u>	<u>ROR Ordinance In Effect</u>	<u>Exhibit 6 Coverage Req'mt (AF)</u>	<u>Toilet Replacement Program Water Savings* (AF)</u>
2006	YES	NO	NO	17.50	29.62
2007	YES	NO	NO	49.79	70.03
2008	YES	NO	NO	94.51	121.39
2009	NO	NO	NO	149.60	170.71
2010	NO	NO	NO	213.27	
2011	NO	NO	NO	283.98	
2012	NO	NO	NO	360.39	
2013	NO	NO	NO	441.31	
2014	NO	NO	NO	525.75	
2015	NO	NO	NO	612.82	

\*NOTE: Program water savings listed are net of the plumbing code. Savings are cumulative (not annual) between 1991 and the given year. Residential ULFT count data from unsubmitted forms are NOT included in the calculation.

### BMP 14 COVERAGE STATUS SUMMARY:

Water supplier is on track to meet the coverage requirements for this BMP.

## BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit: City of Folsom

### BMP 14 Coverage Calculation Detail: Retrofit on Resale (ROR) Ordinance Water Savings

	Single Family	Multi- Family
1992 Housing Stock		
Average rate of natural replacement (% of remaining stock)	.04	.04

Average rate of housing demolition (% of remining stock)	.005	.005
Estimated Housing Units with 3.5+ gpf Toilets in 1997	3519.61	1748.75
Average resale rate	.0491	.104
Average persons per unit	2.78	2.2
Average toilets per unit	2	1.5
Average savings per home (gpd; from Exhibit 6)	43.1	49

### Single Family Housing Units

<u>Coverage</u> <u>Year</u>	<u>Unretrofitted</u> <u>Houses</u>	<u>Houses</u> <u>Sold</u>	<u>Houses</u> <u>Unsold</u>	<u>Sold and</u> <u>Retrofitted</u>	<u>Sold and</u> <u>Already</u> <u>Retrofitted</u>	<u>Unsold</u> <u>and</u> <u>Retrofitted</u>	<u>Gross</u> <u>ROR</u> <u>Savings</u> <u>(AFY)</u>	<u>Nat'l</u> <u>Replacement</u> <u>Only</u> <u>Savings</u> <u>(AFY)</u>	<u>Net ROR</u> <u>Savings</u> <u>(AFY)</u>
2006	3214.46	171.95	3330.07	171.95		133.20	121.43	113.46	7.97
2007	2935.77	171.09	3313.42	157.04	14.05	121.65	134.88	119.95	14.93
2008	2681.24	170.23	3296.85	143.43	26.81	111.11	147.17	126.19	20.98
2009	2448.77	169.38	3280.37	130.99	38.39	101.47	158.39	132.17	26.22
2010	2236.46	168.54	3263.96	119.63	48.90	92.68	168.64	137.92	30.72
2011	2042.56	167.69	3247.64	109.26	58.43	84.64	178.00	143.44	34.56
2012	1865.47	166.85	3231.41	99.79	67.07	77.30	186.54	148.74	37.81
2013	1703.73	166.02	3215.25	91.14	74.88	70.60	194.35	153.83	40.52
2014	1556.02	165.19	3199.17	83.24	81.96	64.48	201.48	158.71	42.77
2015	1421.11	164.36	3183.18	76.02	88.35	58.89	207.99	163.41	44.59

### Multi Family Housing Units

<u>Coverage</u> <u>Year</u>	<u>Unretrofitted</u> <u>Houses</u>	<u>Houses</u> <u>Sold</u>	<u>Houses</u> <u>Unsold</u>	<u>Sold and</u> <u>Retrofitted</u>	<u>Sold and</u> <u>Already</u> <u>Retrofitted</u>	<u>Unsold</u> <u>and</u> <u>Retrofitted</u>	<u>Gross</u> <u>ROR</u> <u>Savings</u> <u>(AFY)</u>	<u>Nat'l</u> <u>Replacement</u> <u>Only</u> <u>Savings</u> <u>(AFY)</u>	<u>Net ROR</u> <u>Savings</u> <u>(AFY)</u>
2006	1505.43	180.96	1559.05	180.96		62.36	73.62	64.09	9.53
2007	1295.96	180.06	1551.25	155.78	24.27	53.68	85.12	67.76	17.36
2008	1115.64	179.16	1543.49	134.11	45.05	46.22	95.01	71.28	23.74
2009	960.41	178.26	1535.78	115.45	62.81	39.78	103.53	74.66	28.87
2010	826.78	177.37	1528.10	99.38	77.99	34.25	110.87	77.91	32.96
2011	711.74	176.48	1520.46	85.55	90.93	29.48	117.18	81.03	36.16
2012	612.71	175.60	1512.86	73.65	101.95	25.38	122.62	84.02	38.60
2013	527.45	174.72	1505.29	63.40	111.32	21.85	127.29	86.89	40.40
2014	454.06	173.85	1497.76	54.58	119.27	18.81	131.32	89.65	41.67
2015	390.89	172.98	1490.28	46.99	125.99	16.19	134.79	92.30	42.49



# **TOTAL WATER SAVINGS REPORTS**

**2008**

**Total Water Savings (AF) Report**

Reporting Unit:  
**City of Folsom**

**Estimated Water Savings from BMP Annual Report Data**

<b>BMP01:</b> Water Survey Programs for Single-Family and Multi-Family Residential Customers	<b>125</b>
<b>BMP02:</b> Residential Plumbing Retrofit	<b>155</b>
<b>BMP04:</b> Metering with Commodity Rates for all New Connections and Retrofit of Existing	<b>1,036</b>
<b>BMP05:</b> Large Landscape Conservation Programs and Incentives	<b>157</b>
<b>BMP06:</b> High-Efficiency Washing Machine Rebate Programs	<b>16</b>
<b>BMP09:</b> Conservation Programs for CII Accounts	<b>296</b>
<b>BMP14:</b> Residential ULFT Replacement Programs	<b>178</b>
<b>Total:</b>	<b>1,963</b>

**Water Savings (AF) Detail Report for  
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers**

Reporting Unit:  
**City of Folsom**

**Estimated Water Savings from BMP Annual Report Data**

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	4
2006	18
2007	29
2008	40
2009	34
<b>TOTAL:</b>	<b>125</b>

## Water Savings (AF) Detail Report for BMP 02: Residential Plumbing Retrofit

Reporting Unit:  
City of Folsom

### Estimated Water Savings from BMP Annual Report Data

Year	Gross Water Savings (AF)	Water Savings (AF) Net of Plumbing Code
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	1	1
2006	18	17
2007	34	27
2008	51	33
2009	51	21
<b>TOTALS:</b>	<b>155</b>	<b>99</b>

## Water Savings (AF) Detail Report for BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit:  
City of Folsom

Estimated Water Savings from BMP Annual Report Data

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	0
2006	147
2007	272
2008	309
2009	309
<b>TOTAL:</b>	<b>1,036</b>

## Water Savings (AF) Detail Report for BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:  
City of Folsom

### Estimated Water Savings from BMP Annual Report Data

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	1
2006	19
2007	39
2008	52
2009	47
<b>TOTAL:</b>	<b>157</b>

## Water Savings (AF) Detail Report for BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
City of Folsom

### Estimated Water Savings from BMP Annual Report Data

Year	Gross Water Savings (AF)	Water Savings (AF) Net of Program Freeridership Effects
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	0	0
2006	1	1
2007	3	3
2008	6	5
2009	6	5
<b>TOTAL:</b>	<b>16</b>	<b>14</b>

**Water Savings (AF) Detail Report for  
BMP 09: Conservation Programs for CII Accounts  
(Includes water savings from BMP 09a: CII ULFTs)**

Reporting Unit:  
City of Folsom

**Estimated Water Savings from BMP Annual Report Data**

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	0
2006	42
2007	58
2008	84
2009	112
<b>TOTAL:</b>	<b>296</b>



## Water Savings (AF) Detail Report for BMP 14: Residential ULFT Replacement Programs

Reporting Unit:  
City of Folsom

### Estimated Water Savings from BMP Annual Report Data

Year	Gross Water Savings (AF)	Water Savings (AF) Net of Plumbing Code	Water Savings (AF) Net of Plumbing Code and Program Freeridership Effects
1991	0	0	0
1992	0	0	0
1993	0	0	0
1994	0	0	0
1995	0	0	0
1996	0	0	0
1997	0	0	0
1998	0	0	0
1999	0	0	0
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	7	7	3
2006	23	23	11
2007	42	40	20
2008	53	51	25
2009	53	49	24
<b>TOTALS:</b>	<b>178</b>	<b>169</b>	<b>85</b>



## **ATTACHMENT M**

### **City of Folsom 2009 California Urban Water Conservation Council Coverage Report**

The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name (District name):  Last name:   
Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

## Base Year Data

[Link to FAQs](#)

### Reporting Unit Base Year

Base Year

What is your reporting period?

### BMP 1.3 Metering

Number of unmetered accounts in Base Year

### BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year

Number of Multi Family Units in Base Year

### BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992

Number of Multi Family Units prior to 1992

Average number of toilets per single family household

Average number of toilets per multi family household

Five year average resale rate of single family households

Five-year average resale rate of multi family households

Average number of persons per single family household

Average number of persons per multi family household

### BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts

Number of accounts with dedicated irrigation meters

Number of CII accounts without meters or with Mixed Use Meters

Number of CII accounts

Comments:

The fields in red are required.

Agency name:  Primary contact:  
 First name:   
 Division name (Reporting unit):  Last name:   
 Reporting unit number:  Email:



## WATER SOURCES

Service Area Population:

### Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Folsom Lake	22,041.00	Surface	USBR Contract 14-06-200-5515A, W
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
San Juan Water District	1,647.00	Surface	Retail service to Ashland
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

2009

The fields in red are required.



Agency name:  Primary contact:  
 Division name (Reporting unit):  First name:   
 Reporting unit number:  Last name:   
 Email:

Service Area Population:

## Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Folsom Lake	2,731.00	Raw Water	Aerojet Industrial
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	
		Select a water type.	

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail,

2009

Primary contact:

First name: Don

Last name:

Email: dsmith@folsom.ca.us



## Potable Water Billed

**Make sure to enter numbers in AF/Year.**

[illegible]

## Potable Water Un-Billed

[illegible]

Primary contact:

First name:

Last name:

Email: [dsmith@folsom.ca.us](mailto:dsmith@folsom.ca.us)



## Non-Potable Billed

## Non-Potable Un-Billed

[illegible]



The fields in red are required.



Primary contact:  
Agency name:  First name:   
Reporting unit name  
(District name)  Last name:   
Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

# 2009

## BMP 1.1 Operations Practices

Comments:

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

### Conservation Coordinator

Conservation Coordinator ☒ Yes ☐ No

### Contact Information

First Name   
Last Name   
Title   
Phone   
Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

### Water Waste Prevention

Water Agency shall do one or more of the following:

- Enact and enforce an ordinance or establish terms of service that prohibit water waste
- Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- Support legislation or regulations that prohibit water waste
- Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- Support local ordinances that prohibit water waste
- Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- A description of, or electronic link to, any ordinances or terms of service
- A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- description of agency support positions with respect to adoption of legislation or regulations

**You can show your documentation by providing files, links (web addresses), and/or entering a description.**

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

[http://nt5.scbbs.com/cgi-bin/om\\_isapi.dll?clientID=198198877&headingswithhits=on&hitsperheading=on&](http://nt5.scbbs.com/cgi-bin/om_isapi.dll?clientID=198198877&headingswithhits=on&hitsperheading=on&)

Enter a description:

The City of Folsom has adopted and actively enforces Folsom Municipal Code 13.26, including prohibitions against the wasteful use of water. The City of Folsom has coordinated with other agencies in our region to standardize language for drought stages and dry year responses. The City has also worked with local agencies and land use authorities on implementing AB 1881, the Model Water Efficient

The fields in red are required.



Agency name:

Reporting unit name

(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

# 2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009?

Yes

☒

No

☐

If yes, answer the following:

Determine metered sales in AF:

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.

Determine system verifiable uses AF:

Determine total supply into the system in AF:

Does your agency keep necessary data on file to verify the answers above? Yes

☒

No

☐

Did your agency complete a full-scale system water audit during 2009?

Yes

☒

No

☐

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC?

Yes

☒

No

☐

Did your agency operate a system leak detection program? Yes

☒

No

☐

## Comments:

The large difference between total supply into the system compared to metered sales and verifiable uses is due to the fact that most residential customers within the City of Folsom were billed at a flat rate water use for the 2009 Calendar Year.

The fields in red are required.

Primary contact:

Agency name:

First name:

Reporting unit name  
(District name)

Last name:

Reporting unit number:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



## BMP 1.3 Metering with Commodity

[Link to FAQs](#)

[See the complete MOU: View MOU](#)

[See the coverage requirements for this BMP:](#)

### Implementation

Does your agency have any unmetered service connections?

☒ Yes ☐ No

If YES, has your agency completed a meter retrofit plan?

☒ Yes ☐ No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered?

☒ Yes ☐ No

Are all new service connections being billed volumetrically?

☒ Yes ☐ No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?

☒ Yes ☐ No

### Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Fire Lines	<input type="text" value="644"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="Monthly"/>	<input type="text" value="0"/>
Industrial	<input type="text" value="56"/>	<input type="text" value="56"/>	<input type="text" value="56"/>	<input type="text" value="Monthly"/>	<input type="text" value="2"/>
Multi-Family	<input type="text" value="869"/>	<input type="text" value="869"/>	<input type="text" value="869"/>	<input type="text" value="Monthly"/>	<input type="text" value="4"/>
Commercial	<input type="text" value="678"/>	<input type="text" value="651"/>	<input type="text" value="651"/>	<input type="text" value="Monthly"/>	<input type="text" value="24"/>
Single-Family	<input type="text" value="978"/>	<input type="text" value="978"/>	<input type="text" value="978"/>	<input type="text" value="Monthly"/>	<input type="text" value="10"/>
Institutional	<input type="text" value="32"/>	<input type="text" value="32"/>	<input type="text" value="32"/>	<input type="text" value="Monthly"/>	<input type="text" value="2"/>
Dedicated Irrigatic	<input type="text" value="67"/>	<input type="text" value="67"/>	<input type="text" value="67"/>	<input type="text" value="Monthly"/>	<input type="text" value="5"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

### Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? ☐ Yes ☒ No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

### General Comments about BMP 1.3:

In January 2013, all customers will be billed based on volumetric water use.

The fields in red are required.

Primary contact:

Agency name: **City of Folsom**

First name: **Don**

Reporting unit name

(District name) **City of Folsom**

Last name: **Smith**

Reporting unit number: **6978**

Email: **dsmith@folsom.ca.us**

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



2009

## BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to [natalie@cuwcc.org](mailto:natalie@cuwcc.org).

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue	Customer Meter/Service (Fixed Charges)
Non-Volumetric Flat	Single-Family	7,056,019.25		33.55	
Uniform	Multi-Family	673,426.18		70.75	
Uniform	Commercial	1,704,076.41		62.34	
Uniform	Industrial	313,016.95		572.25	
Uniform	Institutional	197,254.30		64.80	
Uniform	Dedicated Irrigation	955,691.70		68.61	
Non-Volumetric Flat	Fire Lines	84,057.12		10.78	

### Implementation Option (Conservation Pricing Option)

- ☒ Use Annual Revenue As Reported  
☐ Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service

☒ Yes ☐ No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue	Commodity Charges	Total Revenue	Customer Meter/Service (Fixed Charges)
Non-Volumetric Flat	Single-Family	3,600,326.50		16.15	
Non-Volumetric Flat	Multi-Family	1,121,288.71		48.71	
Non-Volumetric Flat	Commercial	1,026,891.11		89.42	
Non-Volumetric Flat	Industrial	649.81		64.98	
Non-Volumetric Flat	Institutional	49,712.18		121.25	
Uniform	Commercial	7,087.46		48.54	
Uniform	Institutional	5,529.40		502.67	

Comments:

Sewer charges are based on the listed flat rate multiplied by a conversion of square

The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name (District name):  Last name:   
Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

# 2009

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

☒ Yes ☐ No

Enter the name(s) of the wholesale agency (comma delimited)

Regional Water Authority

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ☒

Number of Public Contacts	Public Information Programs
2	General water conservation information
23,342	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
9	Newsletter articles on conservation
31	General water conservation information
	Select a public contact

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

☒ Yes ☐ No

Enter the name(s) of the wholesale agency (comma delimited)

Regional Water Authority

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year? ☒

#### Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types
14		Articles or stories resulting from outreach
2		Newspaper contacts
15		News releases
1		Radio contacts
1		Written editorials
		Select a type of media contact

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP?

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Enter your agency's URL (website address):


[www.rwah2o.org](http://www.rwah2o.org)

[illegible]

☒ Yes ☐ No

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount	Personnel Costs Included? If yes, check the box.	Comments
Regional Water <input checked="" type="checkbox"/>	\$8,420	<input checked="" type="checkbox"/>	Consultant only, Feb-Jul 2009
Regional Water <input checked="" type="checkbox"/>	\$164,308	<input checked="" type="checkbox"/>	Consultant only, July 2009 - December 2010
Bill Stuffers	\$1,891	<input type="checkbox"/>	Promoting Conservation programs
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	



The fields in red are required.

Primary contact:

Agency name: City of Folsom

First name: Don

Reporting unit name

(District name) City of Folsom

Last name: Smith

Reporting unit number: 6978

Email: dsmith@folsom.ca.us

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

# 2009

## BMP 2.1 Public Outreach Cont'd

[View MOU](#)

### Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Regional Water Efficiency Program	\$8,420	<input checked="" type="checkbox"/>	If yes, check the check box.
Regional Water Efficiency Program	\$164,308	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

### Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

☒ Yes ☐ No

### Public Outreach Additional Information

Public Information Programs	Importance
The Regional Water Efficiency Program designed and implemented a Community-Based	\$1

### Social Marketing Programs

#### Branding

Does your agency have a water conservation "brand," "theme" or mascot? ☒ Yes ☐ No

Describe the brand, theme or mascot.

The Regional Water Efficiency Program uses one overall brand image ("Be Water Smart") and a separate image for the current outdoor water efficiency campaign ("Blue Thumb")

### Market Research

Have you sponsored or participated in market research to refine your message? ☒ Yes ☐ No



Market Research Topic

The Regional Water Efficiency Program conducted a statistically valid telephone survey of 600 customers about water efficiency knowledge, attitudes and behaviors; also written/online surveys of participants in the Community-Based Social Marketing (CBSM) program Blue Thumb Neighbors

Brand Message

"Be Water Smart:" use water wisely/"Blue Thumb:" use water efficiently outdoors

Brand Mission Statement

The "Be Water Smart" and "Blue Thumb" brands both encourage residents to use water efficiently at home. "Blue Thumb" focuses on water efficiency in the landscape where most water use--and water waste--occurs

### Community Committees

Do you have a community conservation committee?

☒ Yes ☐ No

Enter the names of the community committees:

Regional Water Efficiency Public Outreach Subcommittee

### Training

Training Type	# of Trainings	# of Attendees	Description of Other
Green Gardener Train <sup>+</sup>	\$2	\$61	The Green Gardener Training Program educates local gard <sup>+</sup>
Site Water Managem <sup>+</sup>	\$1	\$65	Site Water Management class trains landscapers to evalua <sup>+</sup>

### Social Marketing Expenditures

#### Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description
Regional Water Efficiency <sup>+</sup>	19920	Designed and implemented a Community-Based Social Marketing (CBSM) <sup>+</sup>

### Partnering Programs - Partners

Name

Type of Program

☒ CLCA?

Host CLCA Water Management Training

☐ Green Building Programs?

☒ Master Gardeners?

Present irrigation efficiency seminars at master gardener workshops for the public and for master gardeners.

☐ Cooperative Extension?

☒ Local Colleges?

Folsom Lake college, speak at Earth Day Seminars on water issues and conservation.

☒ Other

The Regional Water Efficiency Program partnered with Northern California Ace Hardware Stores to present an in-person presentation to manag<sup>+</sup>

☐ Retail and wholesale outlet; name(s) and type(s) of programs:

--	--

### Partnering Programs - Newsletters

Number of newsletters per year

--



Number of customers per year

**Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

The Regional Water Efficiency Program partnered with the Sacramento Municipal Utility District to publish an article in SMUD's newsletter "Connections" on the water-energy use connection. This partnership also included a joint Public Service Announcement on the water-

**Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

The City of Folsom supports activities at the Fair Oaks Horticulture Center Water Efficient Landscape Demonstration Garden.

**Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Comments:

The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name  
(District name)  Last name:   
Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

# 2009

## BMP 2.2 School Education Programs, Retail Agencies School Programs

[View MOU](#)

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?

☒ Yes ☐ No

Enter Wholesaler Names, separated by commas:

☒ Materials meet state education framework requirements?

Description of Materials

• Student supplements, written by an award-winning environmental educator and edited by water agency personnel  
• Teaching materials, online Be Water Smart teacher guides and activities  
• California Waterways map  
• Student contests for K-4th grades and 5th-8th grades  
• Subscription to Sacramento Bee newspaper for 4 consecutive weeks for the program

☒ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

• Student supplements, written by an award-winning environmental educator and edited by water agency personnel  
• Teaching materials, online Be Water Smart teacher guides and activities  
• California Waterways map  
• K-4 will receive a class set of "Water Conservation and You booklets"  
• Student contests for K-4th grades and 5th-8th grades  
• Subscription to Sacramento Bee newspaper for 4 consecutive weeks for the program

Number of students reached

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

### School Program Activities

#### Classroom presentations:

Number of presentations

Number of attendees

#### Large group assemblies:

Number of presentations

Number of attendees

#### Children's water festivals or other events:

Number of presentations

Number of attendees

**Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:**

Number of presentations

Number of attendees

**Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):**

Description		
Number distributed		
<b>Staffing children's booths at events &amp; festivals:</b>		
Number of booths	2	Number of attendees 160
<b>Water conservation contests such as poster and photo:</b>		
<small>           * Be Water Smart contest for grades K-4 students. Students are asked to review water saving tips with their parents, choose three that they will do at home. Forms are signed by both student and parent, and then returned to the teacher to be entered into a drawing to win a classroom visit with Mr. Leaky, their local water provider and winner for the whole class.            * Be Water Smart Challenge contest for grades 5-8 students. Students are asked to review three water education related webinars to answer 20 questions and entered into a drawing to win a \$100 savings bond.         </small>		
Number distributed	4247	
<b>Offer monetary awards/funding or scholarships to students:</b>		
Number Offered		Total Funding
<b>Teacher training workshops:</b>		
Number of presentations		Number of attendees
<b>Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:</b>		
Number of tours or field trips		Number of participants
<b>College internships in water conservation offered:</b>		
Number of internships		Total funding
<b>Career fairs/workshops:</b>		
Number of presentations		Number of attendees
<b>Additional program(s) supported by agency but not mentioned above:</b>		
Description		
Number of events (if applicable)		Number of participants
<b>Total reporting period budget expenditures for school education programs (include all agency costs):</b>		21500

Comments

**ATTACHMENT N**

**City of Folsom 2010 California Urban Water Conservation Council Coverage Report**

The fields in red are required.



Agency name: **City of Folsom** Primary contact:  
 First name: **Don**  
 Division name (Reporting unit): **City of Folsom** Last name: **Smith**  
 Reporting unit number: **6978** Email: **dsmith@folsom.ca.us**

## WATER SOURCES

Service Area Population: **61190**

### Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
Folsom Lake	23,113.00	Surface	USBR Contract 14-06-200-5515A,
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
San Juan Water District Wholesale	1,331.00	Surface	Retail service to Ashland
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	
		Other	

Exported Water Name	AF/YEAR	Where Exported?

# 2010

Primary contact:

First name: Don

Last name:

Email: dsmith@folsom.ca.us



61190

If you select Other for type, enter

[illegible][illegible][illegible]



Agency name:  First name:

Division name (Reporting unit) **City of Folsom** Last name: **Smith**

Reporting unit number: 6978 Email: dsmith@folsom.ca.us

# Water Uses

# 2010

## Potable Water Billed

[illegible]

## Potable Water Un-Billed

[illegible]

Primary contact:

First name:



Last name: **Smith**

Email: dsmith@folsom.ca.us

# Water Uses

## 2010

## Non-Potable Billed

[illegible]

## Non-Potable Un-Billed

[illegible]



The fields in red are required.



Agency name:

Reporting unit name  
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

# 2010

## BMP 1.1 Operations Practices

Comments:

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

### Conservation Coordinator

Conservation Coordinator ☒ Yes ☐ No

### Contact Information

First Name

Last Name

Title

Phone

Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

### Water Waste Prevention

Water Agency shall do one or more of the following:

- Enact and enforce an ordinance or establish terms of service that prohibit water waste
- Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- Support legislation or regulations that prohibit water waste
- Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- Support local ordinances that prohibit water waste
- Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- A description of, or electronic link to, any ordinances or terms of service
- A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- description of agency support positions with respect to adoption of legislation or regulations

**You can show your documentation by providing files, links (web addresses), and/or entering a description.**

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

Enter a description:

The City of Folsom has adopted and actively enforces Folsom Municipal Code 13.26, including prohibitions against the wasteful use of water. The City of Folsom has coordinated with other agencies in our region to standardize language for drought stages and dry year responses. The City has also worked with local agencies and land use authorities on implementing AB 1881, the Model Water Efficient

The fields in red are required.



Agency name:  Primary contact:  
Reporting unit name:  First name:   
(District name)  Last name:   
Reporting unit number:  Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

# 2010

## BMP 1.2 Water Loss Control

[View MOU](#)

### AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software ☒ Yes ☐ No  
Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score  
from AWWA spreadsheet

Agency Completed Training In The AWWA Water Audit Method ☒ Yes ☐ No  
Agency Completed Training In The Component Analysis Process ☒ Yes ☐ No

Completed/Updated the Component Analysis (at least every 4 years)? ☒ Yes ☐ No

Component Analysis Completed/Updated Date

### Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective ☒ Yes ☐ No

### Recording Keeping Requirements:

Date/Time Leak Reported	Leak Location
Type of Leaking Pipe Segment or Fitting	Leak Running Time From Report to Repair
Leak Volume Estimate	Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective ☐ Yes ☒ No

Type of Program Activities Used to Detect Unreported Leaks

In 2008, the City hired Water Systems Optimization (WSO) to conduct an AWWA Standard Water Balance and Audit. As a result of this audit, the City then began to implement a leak and loss detection program that began in 2011.

### Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)
128		\$2.67	N/A			1,339.00

Comments:

The City Repaired 128 reported leaks and breaks in 2010. The total estimated volume of water saved was 1339 AF/Year. As mentioned above, the City began to implement a leak and loss detection program in 2011 that accounts for reported and un-reported leaks as well as accounting for economic value of real loss and apparent losses throughout the City of Folsom.

The fields in red are required.

Agency name:

Reporting unit name

(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



## BMP 1.3 Metering with Commodity 2010

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

### Implementation

Does your agency have any unmetered service connections?

☐ Yes ☒ No

If YES, has your agency completed a meter retrofit plan?

☒ Yes ☐ No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered?

☒ Yes ☐ No

Are all new service connections being billed volumetrically?

☐ Yes ☒ No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?

☒ Yes ☐ No

### Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
Industrial	<input type="text" value="57"/>	<input type="text" value="57"/>	<input type="text" value="57"/>	<input type="text" value="Monthly"/>	<input type="text" value="1"/>
Multi-Family	<input type="text" value="875"/>	<input type="text" value="875"/>	<input type="text" value="875"/>	<input type="text" value="Monthly"/>	<input type="text" value="3"/>
Commercial	<input type="text" value="686"/>	<input type="text" value="686"/>	<input type="text" value="686"/>	<input type="text" value="Monthly"/>	<input type="text" value="24"/>
Single-Family	<input type="text" value="16,080"/>	<input type="text" value="16,080"/>	<input type="text" value="1,538"/>	<input type="text" value="Monthly"/>	<input type="text" value="56"/>
Institutional	<input type="text" value="33"/>	<input type="text" value="33"/>	<input type="text" value="33"/>	<input type="text" value="Monthly"/>	<input type="text" value="4"/>
Fire Lines	<input type="text" value="677"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="Monthly"/>	<input type="text" value="0"/>
Dedicated Irrigatic	<input type="text" value="78"/>	<input type="text" value="78"/>	<input type="text" value="78"/>	<input type="text" value="Monthly"/>	<input type="text" value="8"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Other"/>	<input type="text"/>

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

### Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? ☐ Yes ☒ No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

Web address(s) URL: comma-separated list

Comments:

The fields in red are required.

Primary contact:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Agency name: **City of Folsom**

First name: **Don**

Reporting unit name  
(District name) **City of Folsom**

Last name: **Smith**

Reporting unit number: **6978**

Email: **dsmith@folsom.ca.us**



[Link to FAQs](#)

## BMP 1.4 Retail Conservation Pricing

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to [natalie@cuwcc.org](mailto:natalie@cuwcc.org).

### Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Non-Volumetric Flat	Single-Family	6,929,998.59	33.55
Uniform	Multi-Family	822,297.33	31.68
Uniform	Commercial	1,789,481.21	183.74
Uniform	Industrial	375,889.33	61.85
Uniform	Institutional	203,852.52	112.67
Uniform	Dedicated Irrigation	1,389,016.33	161.61
Non-Volumetric Flat	Fire Lines	98,010.67	11.46

### Implementation Option (Conservation Pricing Option)

- ☒ Use Annual Revenue As Reported  
☐ Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to [natalie@cuwcc.org](mailto:natalie@cuwcc.org)

### Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service

☐ Yes ☐ No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)
Non-Volumetric Flat	Single-Family	3,625,862.07	16.15
Non-Volumetric Flat	Multi-Family	1,374,626.75	57.01
Non-Volumetric Flat	Commercial	915,426.13	73.21
Non-Volumetric Flat	Industrial	4,952.54	137.57
Non-Volumetric Flat	Institutional	42,522.45	96.42
Uniform	Commercial	7,389.43	47.07
Uniform	Institutional	4,408.30	367.34

Comments:

Sewer charges are based on the listed flat rate multiplied by a conversion of square



The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name (District name):  Last name:   
Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

# 2010

## BMP 2.1 Public Outreach - Retail Reporting

### Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

☒ Yes ☐ No

Enter the name(s) of the wholesale agency (comma delimited)

Regional Water Authority

### Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

#### Public Information Programs List

Did at least one contact take place during each quarter of the reporting year? ☒

Number of Public Contacts	Public Information Programs
6	Landscape water conservation media campaigns
23,159	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets
5	Newsletter articles on conservation
21	General water conservation information
	Select a public contact

### Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

☒ Yes ☐ No

Enter the name(s) of the wholesale agency (comma delimited)

Regional Water Authority

### OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year? ☒

#### Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types
9		Articles or stories resulting from outreach
8		News releases
1		Radio contacts
		Select a type of media contact
		Select a type of media contact
		Select a type of media contact

### Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? ☐ Yes ☐ No

Enter the name(s) of the wholesale agency (comma delimited)

Regional Water Authority

### Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

www.rwah2o.org, www.bewatersmart.info

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

1. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.
2. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.
3. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.
4. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.
5. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.
6. The website section of the new web2o.org includes information about latest high efficiency fixtures, water conservation, energy conservation, and water conservation. This section is updated annually with product changes and is a minimum of four pages.

Did at least one Website Update take place during each quarter of the reporting year? ☐ Yes ☐ No

### Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount	Personnel Costs Included? If yes, check the box.	Comments
Regional Water	\$164,308	<input checked="" type="checkbox"/>	Consultant only, Blue Thumb Neighbors Can+
Bill Stuffers	\$1,891	<input type="checkbox"/>	Promote Water Conservation Programs
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

Comments:



The fields in red are required.

Primary contact:

Agency name: **City of Folsom**

First name: **Don**

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Reporting unit name

Last name: **Smith**

(District name) **City of Folsom**

Reporting unit number: **6978**

Email: **dsmith@folsom.ca.us**



[Link to FAQs](#)

# 2010

## BMP 2.1 Public Outreach Cont'd

[View MOU](#)

### Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
Regional Water Efficiency Program	\$164	<input checked="" type="checkbox"/>	If yes, check the check box.
		<input type="checkbox"/>	
		<input type="checkbox"/>	
		<input type="checkbox"/>	

### Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

☒ Yes ☐ No

### Public Outreach Additional Information

Public Information Programs	Importance
The Regional Water Efficiency Program designed and implemented a Community-Based	\$1

### Social Marketing Programs

#### Branding

Does your agency have a water conservation "brand," "theme" or mascot? ☒ Yes ☐ No

Describe the brand, theme or mascot.

The Regional Water Efficiency Program uses one overall brand image ("Be Water Smart") and a separate image for the current outdoor water efficiency campaign ("Blue Thumb")

### Market Research

Have you sponsored or participated in market research to refine your message? ☒ Yes ☐ No

Market Research Topic

The Regional Water Efficiency Program conducted a statistically valid telephone survey of 600 customers about water efficiency knowledge, attitudes and behaviors; also written/online surveys of participants in the Community-Based Social Marketing (CBSM) program Blue Thumb Neighbors

Brand Message

"Be Water Smart:" use water wisely/"Blue Thumb:" use water efficiently outdoors

Brand Mission Statement

The "Be Water Smart" and "Blue Thumb" brands both encourage residents to use water efficiently at home. "Blue Thumb" focuses on water efficiency in the landscape where most water use--and water waste--occurs

### Community Committees

Do you have a community conservation committee?

☒ Yes ☐ No

Enter the names of the community committees:

Regional Water Efficiency Public Outreach Subcommittee

### Training

Training Type	# of Trainings	# of Attendees	Description of Other
Green Gardener Traini	\$2	\$61	The Green Gardener Training Program educates local gard
Turf Management We	\$1	\$48	Turf team at Raley Field and RWA hosted a workshop on r

### Social Marketing Expenditures

#### Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description
Regional Water Efficiency	19920	Designed and implemented a Community-Based Social Marketing (CBSM)

### Partnering Programs - Partners

Name

Type of Program

☐ CLCA?

☐ Green Building Programs?

☒ Master Gardeners?

Present irrigation efficiency seminars at master gardener workshops for the public and for master gardeners.

☐ Cooperative Extension?

☒ Local Colleges?

Folsom Lake college, speak at Earth Day Seminars on water issues and conservation.

☒ Other

The Regional Water Efficiency Program partnered with The Home Depot and WaterSense during Water Awareness Month in May. Results include

☐ Retail and wholesale outlet; name(s) and type(s) of programs:

--	--

### Partnering Programs - Newsletters

Number of newsletters per year

--



Number of customers per year

**Partnering with Other Utilities**

Describe other utilities your agency partners with, including electrical utilities

The Regional Water Efficiency Program partnered with the Sacramento Municipal Utility District to publish an article in SMUD's newsletter "Connections" on the water-energy use connection. This partnership also included a joint Public Service Announcement on the water-

**Conservation Gardens**

Describe water conservation gardens at your agency or other high traffic areas or new

The City of Folsom supports activities at the Fair Oaks Horticulture Center Water Efficient Landscape Demonstration Garden.

**Landscape contests or awards**

Describe water wise landscape contest or awards program conducted by your agency

Comments:

The fields in red are required.



Agency name:  Primary contact:  
First name:   
Reporting unit name:  Last name:   
(District name)  
Reporting unit number:  Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

# 2010

## BMP 2.2 School Education Programs, Retail Agencies School Programs

[View MOU](#)

Is a wholesale agency implementing school programs which can be counted to help your agency comply with this BMP?

☒ Yes ☐ No

Enter Wholesaler Names, separated by commas:

☒ Materials meet state education framework requirements?

Description of Materials

• Student supplements, written by an award-winning environmental educator and edited by water agency personnel  
• Teaching materials, online Be Water Smart teacher guides and activities  
• California Waterways map  
• Student contests for K-4th grades and 5th-8th grades  
• Subscription to Sacramento Bee newspaper for 4 consecutive weeks for the program

☒ Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

• Student supplements, written by an award-winning environmental educator and edited by water agency personnel  
• Teaching materials, online Be Water Smart teacher guides and activities  
• California Waterways map  
• K-4 will receive a class set of "Water Conservation and You" booklets  
• Student contests for K-4th grades and 5th-8th grades  
• Subscription to Sacramento Bee newspaper for 4 consecutive weeks for the program

Number of students reached

☐ Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

### School Program Activities

#### Classroom presentations:

Number of presentations

Number of attendees

#### Large group assemblies:

Number of presentations

Number of attendees

#### Children's water festivals or other events:

Number of presentations

Number of attendees

#### Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description		
Number distributed		
<b>Staffing children's booths at events &amp; festivals:</b>		
Number of booths		Number of attendees
<b>Water conservation contests such as poster and photo:</b>		
Description		
Number distributed		
<b>Offer monetary awards/funding or scholarships to students:</b>		
Number Offered		Total Funding
<b>Teacher training workshops:</b>		
Number of presentations		Number of attendees
<b>Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:</b>		
Number of tours or field trips		Number of participants
<b>College internships in water conservation offered:</b>		
Number of internships		Total funding
<b>Career fairs/workshops:</b>		
Number of presentations		Number of attendees
<b>Additional program(s) supported by agency but not mentioned above:</b>		
Description		
Number of events (if applicable)		Number of participants
<b>Total reporting period budget expenditures for school education programs (include all agency costs):</b>		21500

Comments